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FIGURE 1

CGGACGCGTGGGTGCGAGGCAGAGGTGACCAGGGACCGAGCATTCTAGG
CCTGGTGCACCACCACCATGTTGGCTGCAAGGCTGGTGTCTCCGGACACTACCTCTAGG
GTTTCCACCCAGCTTCACCAAGGCCTCCCCTGTTGAAGAATTCCATCACGAAGAACATCA
ATGGCTGTTAACACCTAGCAGGGAAATATGCCACAAAACAAGAATTGGGATCCGGCTGGGA
GAACCTGGCCAAGAACTCAAAGAGGCAGCATTGGAACCATCGATGGAAAAAATATTAAAATT
GATCAGATGGGAAGATGGTTGTTGCTGGAGGGCTGCTGTTGGTCTTGGAGCATTGTGCTA
CTATGGCTTGGACTGTCTAATGAGATTGGAGCTATTGAAAAGGCTGTAATTGGCCTCAGT
ATGTCAAGGATAGAATTCCACCTATGTACTTAGCAGGGAGTATTGGTTAACAGCT
TTGTCTGCCATAGCAATCAGCAGAACGCCTGTTCTCATGAACTTCATGATGAGAGGGCTTTG
GGTACAATTGGTGTGACCTTGAGCCATGGTGGAGCTGGAATGCTGGTACGATCAATA
CATATGACCAGAGGCCAGGCCAAAGCATCTGCTTGGTGTACATTCTGGTGTGATGGGT
GCAGTGGTGGCTCCTCTGACAATATTAGGGGTCCTCTCATCAGAGCTGCATGGTACAC
AGCTGGCATTGTGGAGGCCTCTCACTGTGGCCATGTGTGCCAGTGAAAAGTTCTGA
ACATGGGTGCACCCCTGGGAGTGGGCCTGGTCTCGTCTTGTGTCCTCATTGGATCTATG
TTTCTTCCACCTACCACCGTGGCTGGCCACTCTTACTCAGTGGCAATGTACGGTGGATT
AGTTCTTTCAGCATGTTCTCTGTATGATAACCCAGAAAGTAATCAAGCGTGCAGAAAGTAT
CACCAATGTATGGAGTTAAAAATATGATCCCATTAACTCGATGCTGAGTATCTACATGGAT
ACATTTAAATATATTATGCGAGTTGCAACTATGCTGGCAACTGGAGGCAACAGAAAGAAATG
AAGTGACTCAGCTCTGGCTCTGCTACATCAAATATCTGTTAATGGGCAGATATGC
ATTAAATAGTTGTACAAGCAGCTTCGTTGAAGTTAGAAGATAAGAAACATGTCATCATA
TTTAAATGTTCCGTAATGTGATGCCTCAGGTCTGCCTTTCTGGAGAATAATGCAGT
AATCCTCTCCAAATAAGCACACACATTTCATTCTCATGTTGAGTGTATTAAAATGTT
TTGGTGAATGTAAAAACTAAAGTTGTGTCATGAGAATGTAAGTCTTTCTACTTTAAAA
TTTAGTAGGTTCACTGAGTAACTAAAATTAGCAAAACCTGTGTTGCATTTGGAGT
GCAGAATATTGTAATTAAATGTCATAAGTGAATTGGAGCTTGGTAAAGGGACCAGAGAGAAG
GAGTCACCTGCAGTCTTGTAAAAACTTAGAAGCTTAGCACTGTGTTATTGATTA
GTGAGGGAGCCAGTAAGAAACATCTGGTATTGGAAACAAGTGGCATTGTTACATTCA
GCTGAACCTAACAAACTGTTCATCCTGAAACAGGCACAGGTGATGCATTCTCCTGCTGTTG
CTTCTCAGTGCTCTTCCAATATAGATGTGGTCATGTTGACTGTACAGAATGTTAAC
ATACAGAGAATCCTGATGGAATTATATATGTTGTTACTTTGAATGTTACAAAAGGAA
ATAACTTAAACTATTCTCAAGAGAAAATTCAAAGCATGAAATATGTTGCTTTCCAG
AATACAAACAGTATACTCATG

FIGURE 2

MLAARLVCLRTLPSRVFHPAFTKASPVVKNSITKNQWLLTPSREYATKTRIGIRRGRGQEL
KEAALEPSMEKIFKIDQMGRWFVAGGAAVGLGALCYYGLGLSNEIGAIEKAVIWPQYVKDRI
HSTYMYLAGSIGLTALSAIAISRTPVLMNFMMRGSWTIGVTFAAMVGAGMLVRSIPYDQSP
GPKHLAWLLHSGVMGAVVAPLTIILGGPLLI RAAWYTAGIVGGLSTVAMCAPSEKFLNMGAPL
GVGLGLVFVSSLGSMFLPPTTVAGATLYSVAMYGGVLFSMFLLYDTQKVIKRAEVSPMYGV
QKYDPINSMLSIYMDTLNIFMRVATMLATGGNRKK

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FIGURE 3

GAAGGCTGCCTCGTGGTCCGAATCGTGCGCCACGTCCGCCGTCTCCGCCTCTGCAT
CGCGGCTCGCGGCTTCACCTAGACACCTAACAGTCGCGGAGCCGCCGCGTCGTGAGGG
GGTCGGCACGGGGAGTCGGCGGTCTTGTGCATCTGGCTACCTGTGGGTCGAAGATGTGCG
ACATCGGAGACTGGTTCAAGGAGCATCCCGGCATCACCGCCTATTGGTCGCCGCCACCGTC
GCCGTGCCCTGGTCGGCAAACACTGGCCTCATCAGCCGGCCTACCTCTCCTCTGGCCGA
AGCCTCCCTTATCGCTTCAGATTGGAGCCAATCACTGCCACCTTTATTTCCCTGTGG
GTCCAGGAACTGGATTCTTATTGGTCAATTATTTCTTATATCAGTATTCTACGCGA
CTTGAAACAGGGAGCTTTGATGGGAGGCCAGCAGACTATTATTCATGCTCCTTTAAGT
GATTTGCATCGTGAATTACTGGCTTAGCAATGGATATGCAGTTGCTGATGATTCCCTGATCA
TGTCAGTACTTTATGTCTGGGCCAGCTGAACAGAGACATGATTGATCATTTGGTTGGA
ACACGATTTAAGGCCTGCTATTACCCGGTTATCTTGAGTCACATATATCATCGGAGG
CTCGGTAACTCAATGAGCTTATTGGAAATCTGGTGGACATCTTATTTCTTAATGTTCA
GATAACCAATGACTTGGGAGGAAGAAATTCTATCCACACCTCAGTTTGTACCGCTGG
CTGCCAGTAGGAGAGGGAGTACAGGATTGGTGTGCCCCCTGCTAGCATGAGGCAGC
TGCTGATCAGAATGGCGAGGCGGGAGACACAACACTGGGCCAGGGCTTCGACTGGAGACC
AGTGAAGGGGCCCTGGCAGCCGCTCCCTCAAGCCACATTCCCTCCAGTGTCTGGGTG
CACTTAACAAC TGCGTTCTGGCTAACACTGTTGGACCTGACCCACACTGAATGTAGTCTTC
AGTACGAGACAAAGTTCTTAAATCCCAGAAAAATAAGTGTCCAAAGTTCAAGGAT
TCTCATTCAGTCTCTCCACTTCCACACCCCCACATTGCAACTAGAAAAGTTG
TCTTGACACATGCCCTCTCCACTTCCACAGGTTCTGACAGGTTCTGTTATTGACTTTG
CCCATAAAATTGCTCTGCCCTTGACAGGTTCTGTTATTGACTTTGCCAAGGCTGGTC
ACAACAATCATATTACGTTATTCCCTTGGTGGCAGAACACTGTTACCAATAGGGGGAG
AAGACAGCCACGGATGAAGCCTTCTCAGCTTGGAAATTGCTGACTGACATCCGTTGTT
AACCGTTGCCACTTCAAGATATTAAAGTACCAACTGAGTTCATGAGGGCA
CAGATTGGTTATTAGAGATACGAGGGTTGGTGTGGTGTGTTCTGAGCTAAGTGA
TCAAGACTGTAGGGAGTTGCAGCTAACATGGTTAGGTTAAACCATGGGGATGCACCCC
TTTGCCTTCATATGTAGCCCTACTGGTTGTAGCTGGAGTAGTTGGGTTGCTTGTG
TAGGAGGATCCAGATCATGTTGGTACAGGGAGATGCTCTTGGAGAGGTCTGGGATTG
ATTCCCATTCAATCTCATTCTGGATATGTGTTCATGAGTAAAGGAGGAGACCCCTCATA
CGCTATTAAATGTCACCTTTGCCTATCCCCGTTTTGGTCATGTTCAATTAAATTGT
GAGGAAGGCGCAGCTCCTCTGCACGTAGATCATTAAAGCTAATGTAAGCACATCTA
AGGGATAAACATGATTAAAGGTTGAAATGGCTTGAATCATTTGGGTTGAGGGTGTGTT
TTTGAGTCATGAAATGACAAGCTGTGAATCAGACAGCTTAAACACCACACCTTTT
TCGTAGGTGGCTTTCTATCAGAGCTGGCTCATACCAAAATAAGTTTGAGGCCA
TGGCTTTCACACAGTTATTATTTATGACGTTATCTGAAAGCAGACTGTTAGGAGCAGT
ATTGAGTGGCTGTACACTTGAGGCAACTAAAAGGCTCAACAGTTGATCAGTTCTT
TTCAGGAAACATTGCTCTAACAGTATGACTATTCTTCCCCACTCTAAACAGTGTGAT
GTGTGTTATCTTAGGAAATGAGAGTTGGCAAACAAACTCTCATTTGAATAGAGTTGTG
TACTTCTCCATATTAAATTATGATAAAATAGGTGGGAGAGTCTGAACCTTAACGTCA
TGTTTGTGTTCATCTGTCACAAATAAGTTACTTGATAAAATTAGGAGGCCATTACT
CCAATTATGTCACGTACACTCATGTCAGGCAGCTGGAGACTCATTGATGATAAGAATA
TTCTGACAGTGAGTGACCCGGAGTCTGGTGTACCCCTCTTACCAAGTCAGCTGCCCTGCGAG
CAGTCATTCTCAAAGGTTACAAGTATTAGAACCTTCAGTTCAAGGGCAAATGTT
ATGAAGTTATTCTCTTAAACATGGTTAGGAAGCTGATGACGTTATTGATTTGCTGGATT
ATGTTCTGGAATAATTACAAAACAAGCTATTGAGTTGACTTGACAAGGCAAAACA
TGACAGTGGATTCTCTTACAAATGGAAAAAAATCCTTATTGATGATAAGGACTTCCC
TTTGTAAACTAATCCTTTATTGGAAAAATTGTAATGCAACTTG

FIGURE 4

MSDIDGWFRSIPAITYWFAATVAVPLVGKGLISPAYLFLWPEAFLYRFQIWRPITATFYF
PVGPGTGFYLVNLYFLYQYSTRLETGAFDGRPADYLFMLLFNWICIVITGLAMDMQLLMIP
LIMSVLYVWAQLNRDMIVSFWFGRFKACYLPWVILGFNYIIGGSVINELIGNLVGHLYFFL
MFRYPMDLGGRNFLSTPQFLYRWLPSRRGGVSGFGVPPASMRRAADQNGGGGRHNWGQGFRLGDQ

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FIGURE 5

GGGGCCGCGGTCTAGGGCGGCTACGTGTGCCATAGCGACCATTGCATTAACGGTTG
GTAGCTTCTATCCTGGGGCTGAGCGACTGCAGCTCTTCCCCTACTCCCTCGGCT
CCTTGTGGCCAAAGGCCTAACCGGGTCCGGCGGTCTGGCCTAGGGATCTTCCCCGTTGCC
CCTTGCGGGGGATGGCTGCGGAAGAAGAAGACGAGGTGGAGTGGTAGTGGAGAGCATCG
CGGGGTTCCCTGCGAGGCCAGACTGGTCCATCCCCATCTGGACTTGTGGAACAGAAATGT
GAAGTTAACTGCAAAGGAGGGCATGTGATAACTCCAGGAAGGCCAGAGCCGGTATTGGT
GGCCTGTGTTCCCCTTGTGATGATGAAAGAAAGCAAATTGACCTATAAGAGATT
ATCAGGAATACAAAGAAACTAGTTGAAAAGCTGTTAGAAGGTTACCTCAAAGAAATTGGAATT
AATGAAGATCAATTCAAGAACATGCACCTCTCCTCTTGCAGAACAGCCATACATCACAGGC
CATTTGCAACCTGTGTTGGCAGCAGAAGATTTACTATCTTAAAGCAATGATGGTCCAGA
AAAACATTGAAATGCAGCTGCAAGCCATTGAATAATTCAAGAGAGAAATGGTATTACCT
GACTGCTTAACCGATGGCTCTGATGTGGTCAGTGACCTGAACACGAAGAGATGAAAATCCT
GAGGGAAAGTTCTAGAAAATCAAAGAGGAATATGACCAGGAAGAAGGAAGAGGAAAA
AACAGTTATCAGAGGCTAAAACAGAACAGGCCACAGTCATTCCAGTGAAGCTGCAATAATG
AATAATTCCAAGGGATGGTGAACATTGACACACCACCCCTCAGAAGTTAAAATGCATT
TGCTAATCAGTCAATAGAACCTTGGGAAGAAAAGTGGAAAGGTCTGAAACTCCTCCCTCC
CACAAAAAGGCCTGAAGATTCTGGCTTAGAGCATGCGAGCATTGAAGGACCAATAGCAAAC
TTATCAGTACTTGGAACAGAACAGAACACTATCTCAAGCAGAACAGAGA
TAAGTTGATGTCATGAGAAAGGATATGAGGACTAACAGATACAAAATATGGAGCAGAAAG
GAAAACCCACTGGGAGGTAGAGGAATGACAGAGAAACCAGAAATGACAGCAGAGGAGAAG
CAAACATTAAAGAGGAGATTGCTTGCAGAGAAACTCAAAGAAGAAGTTATTAATAAGTA
ATAATTAAGAACAAATTAAACAAAATGGAAGTTCAAATTGTCTAAAATAATTATTTAGTC
CTTACACTG

FIGURE 6

MAAEEEDEVEVVVESIAGFLRGPDWSIPILDVFVEQKCEVNCKGGHVITPGSPEPVILVACVP
LVFDDEEESKLTYTEIHQEYKELVEKLLEGYLKEIGINEDQFQEACTSPLAKTHSQAILQP
VLAAEDFTIFKAMMVQKNIEMQLQAIRIIQERNGVLPDCLTDGSDVVSVDLEHEEMKILREVL
RKSKEYDQEERKRKKQLSEAKTEEPTVHSSEAAIMNNNSQGDGEHFAHPPSEVKMHFANQS
IEPLGRKVERSETSSLPQKGLKIPGLEHASIEGPIANLSVLGTEELRQREHYLKQKRDKLMS
MRKDMRTKQIQNMEQKGKPTGEVEEMTEKPEMTAEEKQTLLKRRLLAEKLKEEVINK

FIGURE 7

GGGCACAGCACATGTGAAGTTTGATGATGAAGAAGAAAGCAAATTGACCTATAACAGAGAT
TCATCAGGAATACAAAGAACTAGTTGAAAAGCTGTTAGAAGGTTACCTCAAAGAAATTGGAA
TTAACATGAAGATCAATTCAAGAACATGCACCTCTCCTTGCAGAACACCACATCACAG
GCCATTTGCAACCTGTGTTGGCAGCAGAAGATTTACTATCTTAAAGCAATGATGGTCC
AGAAAAACATTGAAATGCAGCTGCAAGCCATTGAATAATTCAAGAGAGAAATGGTGTATTA
CCTGACTGCTTAACCGATGGCTCTGATGTGGTCAGTGACCTGAAACACGAAGAGATGAAAAT
CCTGAGGGAAGTTCTAGAAAATCAAAAGAGGAATATGACCAGGAA

FIGURE 8

GCGTGGTTTGTCTGAAATAGCGGCTAGAGGGAGGGCTTTCGCCTATACCTACTG
 TAGCTTCTCCACGTATGGACCCCTAAGGCTACTGCTGCTACTACGGGGCTAGACAGTTACTG
 TCTCAGCTCTAGGATGTGCGTTCTCCACTAGAACGCTCTGAGGGAGGTAATTAAAAAAC
AGTGGAAATGGAAAACAGTGCTGTAGTCATCCTGTAATATGCTCCTGTCAACAATGTATAC
 ATTCCGTAGGTGCCATATTCTTAAAGCTCAAGTCGCATCTTACTAGTGAAAGTATT
 CTGCCAATGAAGAAAACAAGTATGATTATCTTCAACTACTGTGAATGTGTGCTCAGAACTG
 GTGAAGCTAGTTCTGTGTGCTTGTGTTATAAAGAAAGATCATCAAAGTAG
 AAATTGAAATATGCTCCTGGAAGGAATTCTGATTTCATGAAGTGGTCATTCTGCCT
 TTCTTATTCCTGGATAACTTGATTGTCTTCTATGTCCTGTCCATTCTCAACCAGCCATG
 GCTGTTATCTCTCAAATTTAGCATTATAACAAACAGCTCTTCTATTCAAGGATAGTGCTGAA
 GAGGCGTCTAAACTGGATCCAGTGGCTCCCTGACTTTATTTGTCTATTGTGGCCT
 TGACTGCCGGACTAAACTTACAGCACAACTTGCAGGACGTGGATTTCATCACGATGCC
 TTTTCAGCCCTCCAATTCTGCCTTCTTCAGAAGTGAGTGTCCCAGAAAAGACAATTG
 TACAGCAAAGGAATGGACTTTCTGAAGCTAAATGGAACACCACAGCCAGAGTTTCAGTC
 ACATCCGTCTGGCATGGCCATGTTCTTATTATAGTCCAGTGTGTTATTCTCAATGGCT
 AATATCTATAATGAAAAGATACTGAAGGAGGGAAACCAGCTCACTGAAAGCATCTTCATACA
 GAACAGCAAACCTATTCTTGGCATTCTGTTAATGGCTGACTCTGGCCTCAGAGGA
 GTAACCGTATCAGATTAAGAAACTGTGGATTTTATGGCCACAGTGCATTTCAGTAGCC
 CTTATTTGTAACTGCATTCCAGGGCCTTCAGTGGCTTCATTCTGAAGTTCTGGATAA
 CATGTTCCATGTCTGATGGCCAGGTTACACTGTCAATTACAAACAGTGTCTGTCTGG
 TCTTGACTTCAGGCCCTCCCTGGAATTCTTCTGGAAGCCCCATCAGTCCTCTCTATA
 TTTATTATAATGCCAGCAAGCCTCAAGTCCGAAACGCACTAGGCAAGAAAGGATCCG
 AGATCTAAGTGGCAATCTTGGAGCGTCCAGTGGGATGGAGAAGAAACTAGAAAGACTTA
 CCAAACCCAAGAGTGATGAGTCAGATGAAGATATAACTGGTACCCACATAGTTGCA
 GCTCTTGAACCTTATTCACATTTCACTGTTGTAATATTATCTTCACTTTGATA
 AACAGAAATGTTCTAAATCCTAATATTCTTGATATCTAGCTACTCCCTAAATGGTT
 CCATCCAAGGCTTAGAGTACCCAAAGGCTAAGAAATTCTAAAGAACTGATAACAGGAGTAACA
 ATATGAAGAAATCATTAAATATCTCAGTACTTGATAATCAGAAAGTTATATGTGCAGATTAT
 TTTCTTGGCCTTCAGCTCCAAAAACTTGTAAATATCATGTTAGCTAGCTTACATGCCAAAGT
 ACACATAGAGATCAATTGCCAATATTACAATCATGTTAGCTAGTTACATGCCAAAGT
 CTTCCCTTTAACATTATAAAAGCTAGGTTGCTCTTGAAATTGAGGCCCTAGAGATAAGT
 CATTGCAAGTAAAGAGCAACGGGACCCCTTCTAAACGTTGGTGAAGGACCTAAATAC
 CTGGCCATACCAGATGATGGGATGATGTTAGCTGTGCTAAATATTGCTGAAGAAGCAGT
 TTCTCAGACACAACATCTCAGAATTAAATTAGAAATTCTATGGAAATTGGATTTGT
 AATAATCTTGTGATGTTAAACATTGGTCCCTAGTCACCATAGTTACCACTTGTATTAA
 AGTCATTAAACAAGCCACGGTGGGCTTTCTCCTCAGTTGAGGAGAAAATCTTGAT
 GTCATTACTCTGAATTATTACATTGGAGAATAAGAGGGATTATTATTAGTTACT
 AATTCAAGCTGTGACTATTGTATATCTTCAAGAGTTGAAATGCTGGCTTCAGAATCATA
 CAGATTGTCAGTGAAGCTGATGCCTAGGAACCTTAAAGGGATCCTTCTAAAGGATCAGT
 AGCAAACACATGTTGACTTTAACTGATGTATGAATATTAAACTCTAAAGAAAGACC
 AGTAATATATAAGTCACCTTACAGTGCTACTTCACACTTAAAGTCAGGGTATTTCATG
 GTATTGTCAGCCAGTTAACCTCTCGTAGATAGAGAACGTCAGGTGATAGATGATATTAA
 AAATTAGCAAACAAAAGTGACTTGCTCAGGGTCACTGCAGCTGGGTGATGATAGAACAGTGGG
 CTTAACTGGCAGGCCCTGTATGTTACAGACTACCATACTGTAATATGAGCTTATGGTGT
 CATTCTCAGAAACTTACATTCCTGCTCTCCTCTCAGTTGATGCAAGATGAATATA
 AGGTAATATACTATTATAATTCAATTGATCCACAATAATGACTGGCAAGAATTG
 GTGGAAATTGTAATTAAAATAATTAAACCT

FIGURE 9

MEKQCCSHPVICSLSTMYTFLLGAIFIALSSSRILLVKYSANEENKYDYLPTTVNVCSELVK
LVFCVLSFCVIKKDHQSRNLKYASWKEFSDFMKWSIPAFLYFLDNLIVFYVLSYLPAMAV
IFSNFSIITTALLFRIVLKRRLNWIQWASLLTLFLSIVALTAGTKTLQHNLAGRGFHHDAFF
SPSNCLLFRSECPRKDNCAKEWTFPEAKWNTTARVFSHIRLGGMGHVLIIIVQCFISSMANI
YNEKILKEGNQLTESIFIQNSKLYFFGILFNGLTGLQRSNRDQIKNCGFFYGHSAFSVALI
FVTAFQGLSVAFILKFLDNMFHVLMAQVTTVIITTVSVLVFDFRPSLEFFLEAPSVLLSIFI
YNASKPQVPEYAPRQERIRDLSGNLWERSSGDGEELERLTKPKSDESDEDTF

FIGURE 10

CGTGCGCTGCGCAATGGGTGTCGGGTCGCTTTCCAATCCGGACGTAATCGTGGTTTG
TTCTGCAATAGGCAGGCTTAGAGGGAGGGCTTTCGCCTATACTACTGTAGCTTCTCCAC
GTATGGACCCCTAAAGGCTACTGCTGCTACTACGGGGCTAGACAGTTACTGTCTAGCTCTAG
GATGTGCGTTCTTCCACTAGAACGCTTTCTGAGGGAGGTAATTAAAAAACAGTGGAATGAA
AAACAGTGCTGTAGTCATCCTGTAATATGCTCCTGTCAACAATGTATACATTCTGCTAGG
TGCCATATTGCTTAAGCTCAAGTCGCATCTTACTAGTGAAGTATTCTGCCAATGAAAG
AAAACAAGTATGATTATCTTCAAACACTGTGAATGTGTGCTCAGAACTGGTGAAGCTAGTT
TTCTGTGTGCTTGTGTCATTCTGTGTTATAAAGAAAGATCATCAAAGTAGAAATTGAAATA
TGCTTCCTGGAAGGAATTCTCTGATTCATGAAGTGGTCCATTCTGCCTTCTTATTCC
TGGATAACTTGATTGTCTTCTATGTCCTGTCTATCTCAACCAGCCATGGCTGTTATCTC
TCAAATTTAGCATTATAACAACAGCTCTTCTATTAGGATAGTGCTGAAGAGGCGTCAA
CTGGATCCAGTGGCTTCCCTCCTGACTTTATTTGTCTATTGTGGCCTGACTGCCGGGA
CTAAAACTTA

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FIGURE 11

CGGACGCGTGGCGGACGCGTGGCGGACGCGTGGGCCGGCTGGCTAGCGCGCCGGCC
GTGGCTAAGGCTGCTACGAAGCGAGCTTGGAGGAGCAGCGGCCCTGCAGGGCAGAGGAGCAT
CCCGTCTACCAGGTCCAAGCGCGTGGCCCGGGTCATGCCAAAGGAGAACGGCGCCGAG
AGCGGCTCCGGCGGGCTGCTACCCACCAAGCATCCTCAAAGCACTGAACGCCGGCCA
GGTGAAGAAAAGAACGAAAAAGAAGAACACAGTTGTCTGTTGCAACAAGCTTGCTATG
CACTGGGGAGCCCCCTACCAGGTGACGGCTGTGCCCTGGTTCTTCAGATCTAC
CTATTGGATGTGCTCAGGTGGCCCTTCTGCCTCCATCATCCTGTTGTGGCCGAGC
CTGGGATGCCATCACAGACCCCTGGTGGCCCTGCATCAGCAAATCCCCCTGGACCTGCC
TGGTGCCTTATGCCCTGGATCATCTTCTCCACGCCCTGGCCGTATTGCCTACTTCCTC
ATCTGGTCTGCCCACCTCCCACAGGCCAGACCTATTGGTACCTGCTTTCTATTGCCT
CTTGAAACAATGGTCACGTGTTCCATGTTCCACTCGGCCTCACCAGTTCATCAGCA
ACCGAGCAGACTGAGCGGGATTCTGCCACCGCCTATGGATGACTGTGGAAGTGTGGCAC
AGTGGTGGCACGGCGATCCAGGGACAAATCGTGGCCAAGCAGACACGCCCTGGTCCAGG
ACTTCAATAGCTCTACAGTAGCTTCACAAAGTCCAACCATAACATGGCACCACTCACAC
AGGGAAACGCAAAGGCATACCTGCTGGCAGCGGGGTATTGTCTGTATCTATATAATCTG
TGCTGTCTGATCCTGGCGTGCAGGAGCAGAGAGAACCTATGAAGGCCAGCAGTCTG
AGCCAATGCCCTACTTCCGGGCCTACGGCTGGTATGAGCCACGCCCATACATCAAACCT
ATTACTGGCTTCCCTTCACCTCCTTGGCTTATGCTGGAGGGAACTTGTCTTGT
TTGACACCTACACCTTGGCTTCCGCAATGAATTCCAGAATCTACTCCTGCCATCATGCTCT
CGGCCACTTAAACCATTCCATCTGGCAGTGGTCTTGACCCGGTTGGCAAGAAGACAGCT
GTATATGGGATCTCATCAGCAGTGCCTATGAGCAGCTGGCAGCTGGCAGCTGCCCTTAC
CCTCATCATTACATATGCGGTAGCTGTGGCAGCTGGCAGCTGGCAGCTGGCAGCTGCCCT
TACCTGGTCCATGCTGCCTGATGTCTTGACGACTCCATCTGAAGCAGCCCACTTCCAT
GGAACCGAGCCATCTCTCTCTTCTATGTCTTCAACAGTTGCCTCTGGAGTGT
ACTGGCATTCTACCCCTAGCTGGACTTGCAGGGTACCAAGACCCGGCTGCTCGCAGC
CGAACGTGTCAGTTACACTGAACATGCTGTGACCATGGCTCCATAGTTCTCATCTG
CTGGGCCTGCTCTCAAAATGTACCCATTGATGAGGAGAGGCAGGGCAGAATAAGAA
GGCCCTGCAGGCACTGAGGGACGAGGCCAGCAGCTCTGGCTGCTCAGAAACAGACTCACAG
AGCTGGCTAGCATCCTCTAGGGCCGCCACGGTGGCCAGGCCACATGCAGAAGGCCACAG
AAGGGATCAGGACCTGCTGCGGCTTGTGAGCAGCTGGACTGCGAGGTGCTAGGAAGGAA
CTGAAGACTCAAGGAGGTGGCCAGGACACTTGCTGTGCTACTGTGGGCCGCTGCTCTG
TGGCCTCCTGCCTCCCTGCCTGCTGTGGGCCAGGCCCTGGGGCTGCCACTGTGAATA
TGCCAAGGACTGATGGGCCTAGCCCGAACACTAATGTAGAAACCTTTTACAGAGCC
TAATTAATAACTTAATGACTGTGTACATAGCAATGTGTGTATGTATATGTCTGTGAGCTA
TTAATGTTATTAATTTCATAAAAGCTGGAAAGC

FIGURE 12

MWLRWALSLPPSSCLWAEPGMPSQTPWWASASANPPGPAWVALCPGSSSPRPWPSLPTSSSG
SCPTSHTARPIGTCFSIASLKQWSRVSMFPTRLSPCSSATEQTERDSATAYRMTVEVLGTVL
GTAIQGQIVGQADTPCFQDFNSSTVASQSANHTHGTTSRETQKAYLLAAGVIVCIYIICAV
ILILGVREQREPYEAQQSEPIAYFRGLRLVMSHGPYIKLITGFLFTSLAFMLVEGNFVLFCT
YTLGFRNEFQNLLAIMALSATLTIPIWQWFLTRFGKKTAVYVGIISSAVPFLILVALMESNLI
ITYAVAVAAGISVAAAFLLPWSMLPDVIDDFHLKQPHFHGTEPIFFSFYVFFTAKFASGVSLG
ISTLSLD FAGYQTRGCSQPERVKFTLNMLVTMAPIVLILLGLLLFKMYPIDEERRQNKAL
QALRDEASSSGCSETDTELASIL

FIGURE 13

GGGAAACGAAAAGGCATACTGCTGGCAGCGGGGTCAATTGTCTGTATCTATATAATCTGT
GCTGTCATCCTGATCCTGGCGTGGGAGCAGAGAGAACCTATGAAGCCCAGCAGTCTGA
GCCAATCGCCTACTTCCGGGCCTACGGCTGGTCATGAGCCACGGCCATACATCAAACCTTA
TTACTGGCTTCCTCTTCACCTCCTGGCTTCATGCTGGTGGAGGGAACTTGTCCTGTT
TGCACCTACACCTTGGGCTTCCGCAATGAATTCCAGAATCTACTCCTGGCCATCATGCTCTC
GGCCACTTTAACCATCCCCATCTGGCAGTGGTCTTGACCCGGTTGGCAAGAACAGCTG
TATATGTTGGATCTCATCAGCAGTGCCTTCATCTTGGTGGCCCTCATGGAGAGTAAC
CTCATCATTACATATGCGGTAGCTGTGGCAGCTGGCATCAGTGTGGCAGCTGCCTTCTTACT
ACCCTGGTCCATGCTGCCTGATGTCATTGACGACTTCCATCTGAAGCAGCCCCACTTCCATG
GAACCGAGCCCAT

FIGURE 14

GGGGCTTCGGCGCCAGCGGCCAGCGCTAGTCGGTCTGGAAGGATTACAAAAGGTGCAGGT
ATGAGCAGGTCTGAAGACTAACATTGTGAAGTTGTAACAGAAAACCTGTTAGAAATGT
GGTGGTTTCAGCAAGGCCTCAGTTCTTCAGCCCTGTAATTGGACATCTGCTGCT
TTCATATTCATACATTACTGCAGTAACACTCCACCATATAGACCCGGCTTACCTTATAT
CAGTGACACTGGTACAGTAGCTCCAGAAAAATGCTTATTGGGCAATGCTAAATATTGCGG
CAGTTTATGCATTGCTACCATTATGTTGTTATAAGCAAGTTCATGCTCTGAGTCCTGAA
GAGAACGTTATCATCAAATTAAACAAGGCTGGCCTGTACTTGGAAACTGAGTTGTTAGG
ACTTTCTATTGTGGCAAACCTCCAGAAAACAACCCCTTTGCTGCACATGTAAGTGGAGCTG
TGCTTACCTTGATGGCTCATTATATGTTGTTGACGACCATCCTTCCTACCAAATG
CAGCCAAAATCCATGGCAAACAAGTCTTCTGGATCAGACTGTTGTTATCTGGTGTGG
AGTAAGTGCACTTAGCATGCTGACTGCTCATCAGTTGCACAGTGGCAATTGGGACTG
ATTTAGAACAGAAACTCCATTGGAACCCGAGGACAAAGGTTATGTGCTTCACATGATCACT
ACTGCAGCAGAATGGCTATGTCATTTCTTCTTGTTCTGACTTACATTGTA
TTTCAGAAAATTCTTACGGGTGGAAGCCAATTACATGGATTAACCCCTATGACACTG
CACCTGCCCTATTAACAATGAACGAACACGGCTACTTCCAGAGATATTTGATGAAAGGAT
AAAATATTCTGTAATGATTATGATTCTCAGGGATTGGGAAAGGTTCACAGAAGTTGCTTA
TTCTTCTGAAATTCAACCACCTAATCAAGGCTGACAGTAACACTGATGAATGCTGATA
ATCAGGAAACATGAAAGAAGCCATTGATAGATTATTCTAAAGGATATCATCAAGAAGACTA
TTAAAAACACCTATGCCTATACTTTTATCTCAGAAAATAAGTCAAAAGACTATG

FIGURE 15

MWWFQQGLSFLPSALVIWTSAAFIFSYITAVTLHHIDPALPYISDTGTVAPEKCLFGAMLNI
AAVLCIATIYVRYKQVHALSPEENVIIKLNKAGLVLGILSCLGLSIVANFQKTTLFAAHVSG
AVLTFGMGSLYMFVQTILSYQMOPKIHGKQVFIRLLLVIWCGVSALSMLTCSSVLHSGNFG
TDLEQKLHWNPEDKGYVLHMITTAAEWSMSFSFFGFFLTYIRDfqKISLRVEANLHGLTLYD
TAPCPINNERTRLLSRDI

FIGURE 16

CGGACGCTTGGGCNGGCCAGCGGCCAGCGCTAGTCGGTCTGGTAAGTGCCTGATGCCGAGT
TCCGTCTCTCGGGCTTTCTGGTCCCAGGCAAAGCGGAGCGGAGATCCTCAAACGGCCTA
GTGCTTCGCGCTTCCGGAGAAAATCAGCGGTCTAATTAAATT CCTCTGGTTGTTGAAGCAGT
TACCAAGAACATCTCAACCCCTTCCCACAAAAGCTAATTGAGTACACGTTCTGTTGAGTACA
CGTT CCTGTTGATTTACAAAAGGTGCAGGTATGAGCAGGTCTGAAGACTAACATTGTGAA
GTTGTAACAGAAAACCTGTTAGAAATGTGGTGGTTCA GCAAGGCCTCAGTTCCCTCCT
TCAGCCCTTGTAATTGGACATCTGCTGCTTCATATTCATACTACTGCAGTAACACT
CCACCATATAGACCCGGTTACCTTATATCAGTGACACTGGTACAGTANC

FIGURE 17

CCACACCGTCCGCCGCGCTGCGTCCCAGTGCAAGTGAGCTCTGGCTGCCCGCGGG
CCGGGGTGCAGGAGCCGACATGCGCCCGCTTCGGCCTCCTCTGGTCTCGCCGGCTGCAC
CTTCGCCTTGTACTTGCTGTCGACCGACTGCCCGCGGGAGACTGGGCTCCACCGAGG
AGGCTGGAGGCAGGTCGCTGTGGTCCCCCTCCGACCTGGCAGAGCTGCAGGAGCTCTGAG
GTCCTCGAGAGTACCGGAAGGAGCACCAGGCCTACGTGTTCTGCTCTGCGGCCTA
CCTCTACAAACAGGGCTTGCCATCCCCGGCTCCAGCTCCTGAATGTTTAGCTGGTGCCT
TGTTGGGCCATGGCTGGGCTTCTGCTGCTGTGTTGACCTCGGTGGGTGCCACATGC
TGCTACCTGCTCTCCAGTATTTGGCAAACAGTTGGTGGTGCCTACTTCCTGATAAAAGT
GGCCCTGCTGCAGAGAAAGGTGGAGGAGAACAGAAACAGCTGTTTTTTCTTATTGTTT
TGAGACTTTCCCCATGACACCAAACGGTCTTGAACCTCTGGCCCCAATTCTGAACATT
CCCATCGTCAGTTCTTCTCAGTTCTCGGTTGATCCCATAATTACATCTGTGT
GCAGACAGGGTCCATCCTGTCAACCTAACCTCTGGATGCTTTCTCCTGGACACTG
TCTTTAAGCTGTTGCCATTGCCATGGTGGCATTAATTCTGGAACCCCTCATTAAAAAATT
AGTCAGAAACATCTGCAATTGAATGAAACAAGTACTGCTAATCATACACAGTAGAAAAGA
CACATGA TCTGGATTTCTGTTGCCACATCCCTGGACTCAGTTGCTTATTGTGTAATGGA
TGTGGCCTCTAAAGCCCTCATTGTTTGATTGCCTCTAGGTGATGTGGACACTGTG
CATCAATGTGCAGTGTCTTCAGAAAGGACACTCTGCTCTGAAGGTGATTACATCAGGT
TTTCAAACCAGCCCTGGTGTAGCAGACACTGCAACAGATGCCTCTAGAAAATGCTGTTGT
GGCCGGCGCGGTGGCTACGCCTGTAATCCAGCAGTTGGGAGGCCAGGCCGGTGATTC
ACAAGGTCAAGGAGTTCAAGACCAGCCTGGCCAAGATGGTGAATCCTGCTCTAATAAAAAAT
ACAAAAAATTAGCCAGGCGTGGTGGCAGGCACCTGTAATCCCAGCTACTCGGGAGGCTGAGGC
AGGAGAATTGCTTGAACCAAGGTGGCAGAGGTTGCAGTAAGCCAAGATCACACCACTGCACT
CCAGCCTGGGTGATAGAGTGAGACACTGTCTTGAC

FIGURE 18

MRPLLGLLVFAGCTFALYLLSTRLPRGRRLGSTEAGGRSLWFPSDLAELRELSEVLREYR
KEHQAYVFLFCGAYLYKQGFAIPGSSFLNVLAGALFGPWLGLLLCCVLTSGATCCYLLSS
IFGKQLVVSYFPDKVALLQRKVEENRNSLFFFLLFLRLFPMTPNWFLNLSAPILNIPIVQFF
FSVLI GLIPYNFICVQTGSILSTLTSLDALFSWDTVFKLLAIAMVALIPGTLIKFSQKHLQ
LNETSTANHIHSRKDT

FIGURE 19

CCGAGGCAGGGAGGAGCCCCGAGGGGGCGCAGCCCCCATGAATCATTGTAGTCATCATT
CCAGTTCTCAGCCGCTCAGTTGTGATCAAGGGACACGTGGTTCCGAACGCCAGCTCAGAA
TAGGAAAATAACTTGGGATTTATATTGGAAGACATGGATCTTGCTGCCAACGAGATCAGCA
TTTATGACAAACTTCAGAGACTGTTGATTGGTGAGACAGACCGGCCATCAGTGTGGCATG
TCAGAGAAGGCAATTGAAAAATTATCAGACAGCTGCTGGAAAAGAACCTCAGAGACC
CCCCCGCAGTATCCTCTCCTTATAGTTGTGATAGGTTCTCGCAACCTGGGATTAATCT
TGCTCACTGCCTACTTTGTGATTCAACCTTCAGCCCATTAGCACCTGAGCCAGTGCTTCT
GGAGCTCACACCTGGCGCTCACTCATCCATCACATTAGGCTGATGTCCTTGGCCATTGCCAA
GAAGTACATGTCAGAAAATAAGGGAGTTCCCTGCAAGGGGTGATGAAGACAGACCCCTTC
CAGACTTGACCCCTGGTGGACAAACGACTGTGAGCAGAACATGAGTCAGAGCCATTCTGCC
AACTGCACTGGCTGTGCCAGAAACACCTGAAGGTGATGCTCCTGGAAGACGCCAAGGAA
ATTTGAGAGGCTCCATCCACTGGTGATCAAGACGGAAAGCCCTGTTGGAGGAAGAGATTG
AGCATTGGCGCTGCTTCCCTGAGCGGTGGTCCATTCCATTCCATGGAGGAGACCTCTGAA
CAGATCACAAATGTTACGTGAGCTTTCTGTTTCACTCACCTGCCATTCCAAAAGATG
CCTCTTAAACAAGTGCTCCTTCTTCACCCAGAACCTGTTGAGGGAGTAAGATGCATAAG
ATGCCTGACCTATTTATCATTGGCAGCGGTGAGGCCATGTTGAGCTCATCCCTCCCTCCA
GTGCCGAAGACATTGTCAGTCTGTGGCCATGCCAATAGAGCCAGGGGATATGGCTATGTCG
ACACCACCCACTGGAAGGTCTACGTTAGCCAGAGGGGTCCAGCCTTGGTCACTGCGAT
GGAACCGCTTCTCAGAACTGTAGGAAATAGAACTGTGCACAGGAACAGCTCCAGAGCCGA
AAACCAGGTTGAAAGGGAAAAATAAAACAAAAACGATGAAACTGCAAAA

FIGURE 20

MDLAANEISIYDKLSETVDLVRQTGHQCGMSEKAIEKFIRQLLEKNEPQRPPPQYPLLIIVVY
KVLATLGLILLTAYFVIQPFSPLAPEPVLSGAHTWRSЛИHHIRLMSLPIAKKYMSENKGVPL
HGGDEDRPFPDFDPWWTNDCQESEPI PANCTGCAQKHLKVMLLEDAPRKFERLHPLVIKT
GKPLLEEEIQHFLCQYPEATEGFSEGFFAKWWRCFPERWFPPYPWRRPLNRSQMLRELFPV
FTHLPFPKDASLNKCSFLHPEPVVGSKMHKMPDLFIIGSGEAMLQLIIPPQCRRHCQSVAMP
IEPGDIGYVDTTHWKVYVIARGVQPLVICDGTAFSEL

FIGURE 21

CCACGGTGTCCGTTCTCGCCCCGGCGGCAGCTGTCCCCGAGGCAGGGAGGAGCCGAGGGCG
CGAGCCCCGATGAATCATTGTAGTCATCATTTCAGTTCTCAGCCGTTCAGTTGTGATC
AAGGGACACGTGGTTCCGAACTGCCAGCTCAGAACAGGAAAATAACTTGGGATTTATATT
GGAAGACATGGATCTTGCTGCCAACGAGATCAGCATTATGACAAACTTCAGAGACTGTG
ATTGGTGAGACAGACCGGCCATCAGTGTGGCATGTCAGAGAAGGCAATTGAAAAATTATC
AGACAGCTGCTGGAAAAGAACCTCAGAGACCCCCCCCAGTATCCTCTCCTTATAGT
TGTGTATAAGGTTCTCGCAACCTGGGATTAATCTTGCTCACTGCCTACTTTGTGATTCAAC
CTTCAGCCCATTAGCACCTGAGCCAGTGCTTGTGGAGCTCAC

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FIGURE 22

CCCACCGCGTCCGCCAACCGTCCGGCTGAACACCTCTTGGAGTCAGCCACTGATGAGG
 CAGGGTCCCCACTTGCAAGCTGCAGCAGCTGCAGCAGCTGCAGAGCGCTGCTCCGGCTGGTG
 CCACTGGTGCACGCTGCTAGACCGTGCCTATGAGCGCTGGGCTGCAGTGGGACTGCC
 CTCCCTGCCACCCACCAATGGCAGCCCCACCTTCTTAAGAGACTTCCAGGCTTTGTGCCA
 CACCCGAATGGCGCACCTCATCGACAAACAGGTACAGCCAACC**ATG**CCCAGTTGAAATG
 GACACGTATGCTAAGAGCCACGACCTTATGTCAGGTTCTGGAATGCTGCTATGACATGCT
 TATGAGCAGTGGCAGCGGCCAGTGGGAGCGCGCCAGAGTCGTCGGGCTTCCAGGAGC
 TGGTGCCTGAAACCTGCGCAGAGGCGGGCGCCTGGAGGGCTACGCTACACGGCAGTGTG
 AAGCAGCAGGCAACGCAACTCCATGGCCCTGCTGCACTGGGGGGCGCTGTGGCGCCAGG
 CGCCAGCCATGTGGGCCTGGCGCTGAGGGACACTCCCATCCCCCGCTGGAACACTGTCCA
 GCGCCGAGACATATTACGCATGCGTCTGAAGCTGGTGCCTAACCATCACTTCGACCCCTCAC
 CTGGAAGCCAGCGCTCTCGAGACAATCTGGGTGAGGTTCCCTGACACCCACCGAGGAGGC
 CTCACTGCCTCTGGCAGTGAACAAAGAGGCCAAAGTGAGCACCCACCGAGTTGCTGCAAGG
 AGGACCAAGCTCGCGAGGACGAGCTGGTGAAGGAGACCCGATGGAGGGAGCAGAAGCTG
 GATGAGCAGCGTGAAGAGCTGGTGTGCGGCCAGTGCCAGCTGGTGAAGTAGTGGCGT
 GGTCCCAGGGCTGCTGGAGGTCAACACACAGAACATGTATAACTTCTACGATGGCAGCACTGAGC
 GCGTGGAAACCGAGGAGGGCATCGGCTATGATTCCGGGCCACTGGCCAGCTGCGTGAG
 GTCCACCTGCGCGTTCAACCTGCGCCGTTCAAGGCTACCGACTTGAGCTTCTTATGATCAGGC
 CAACTACTCCTCAACTCCCAGTCAAGGTGGGACGACCCAGTCTCATCTCTAGGCCAGA
 CTCCGAGACCCAGCCTGGCCCATCCCACCCATACCCAGGTACGGAACCAGGTACTCG
 TGGCTCCTGCGCTACGGCCCCCTCTCAAGGCTACCTAAGCAGCCGCTCCCCCAGGAGAT
 GCTGCGTGCCTCAGGCCCTACCCAGAAATGGGTACAGCGTGAAGATATCCAACCTCGAGTACT
 TGATGCAACTCAACACCATTGCGGGCGGACCTACAATGACCTGTCTAGTACCCCTGTGTT
 CCCTGGGTCTGCGAGGACTACGTGTCCCCAACCTGGACCTCAGCAACCCAGCGTCTCCG
 GGACCTGTCTAAGCCCATCGGTGTTGAACCCAAAGCATGCCAGCTCGTGAAGGGAGAAGT
 ATGAAAGCTTGAGGACCCAGCAGGGACCATTGACAAGTTCAACTATGGCACCCACTACTCC
 AATGCAAGCAGCGTGAACCTACCTCATCCCGTGGAGCCCTCACCTCCCTGCACGTCCA
 GCTGCAAAGTGGCGCTTGACTGCTCCGACCGGAGTCCACTCGTGGCGGCAGCCTGGC
 AGGCACGCCTGGAGAGGCCCTGCCGATGTGAAGGAGCTCATCCCGAACCTTCTACTTCC
 GACTTCTGGAGAACAGAACCGGTTTGACCTGGCTGTCTCCAGCTGACCAAACGAGAACGG
 AGGGCATGTGGTGTACCCCGTGGGCCAGCTCTCTGAGGACTCTCAGCAGCACCGCC
 AGGCTCTGGAGTCGGAGTATGTGCTGACACCTACACGAGTGGATGACCTCATCTTGGC
 TACAAGCAGCGGGGCCAGCGCCGAGGAGGCCCTCAATGTTCTTACTTGACACCTATGA
 GGGGCTGTAGACCTGGACCATGTGACAGATGAGCGGGAACCGGAAGGGCTGGAGGGCATTA
 TCAGCAACTTGGCAGACTCCCTGTCACTGCTGAAGGAGGCCACATCAACTCCGCTCTCA
 GCTGAGGAAGCAGCCATGCCCTGACGCCACTAAGCAACTACTTCAGCTTCAAGCAAAGACCC
 CCCACAGCTGGTTGCCCTATGACCGCAACATAAGCAACTACTTCAGCTTCAAGCAAAGACCC
 ACCATGGCAGCCACAAAGACGCAAGCAGCTGCTGAGTGGCCCTGGTGCAGGCAGTGGTGT
 GAGTGGACAAGCACTGGCAGTGGCCCCGGATGGAAAGACTGCTATTCAAGCGGTGGCCACTGGG
 ATGGCAGCCTGCGGGTGAUTGCACTACCCCGTGGCAAGACTGTTGAGCAGCTCAGCTGCCAC
 CTTGATGTTAGTAACCTGCCTGCACTGGACACCTGTGGCATCTACCTCATCTCAGGCTCCCG
 GGACACCACGTGCATGGTGTGGCGCTCCGCATCAGGGTGGTCTGTCAGTAGGCCTGGCAC
 CAAAGCCTGTGCAGGTCTGTATGGGCATGGGCTGCAGTGAAGCTGTGAGCTGGCCATCAGCACT
 GAACTTGACATGGCTGTGGATCTGAGGATGGAACACTGTGATCATACACACTGTACGCC
 CGGACAGTTGTAGCGGCACTACGGCCTCTGGTGCACATCCCTGGACCTATTTCCACC
 TGGCATTGGGTCGAAGGCCAGATTGTGGTACAGAGCTCAGCGTGGGAACGTCTGGGCC
 CAGGTACCTACTCCTGCACCTGTATTCAAGTCAATGGGAAGTTGCGGGCTTCACTGCC
 GGCAGAGCAGCCTACAGCCCTGACGGTGACAGAGGACTTTGTGTTGCTGGCACC
 GCGCCCTGCACATCCTCCAACAAACACACTGCTCCGGCCGCTCCCTGGCCATGAAG
 GTGGCCATCCGCAGCGTGGCGTGAACAGGAGCGCAGGCCACGTGCTGGTGGCCTGGAGGA
 TGGCAAGCTCATCGTGGTGTGCGGGGCAGCCCTGTGAGGTGCGCAGCAGCCAGTCGCGC
 GGAAGCTGTGGCGTCTCGCGGGCATCTCCAGGTGCTCGGGAGAGACGGAATACAAC
 CCTACTGAGGCGCGCT**TGA**ACCTGCCAGTCCGGCTGCTCGGGCCCCGGCAGGCC
 GCCCGGGAGGCCAGAAGTCGGCGGAACACCCCGGGGTGGCAGGCCAGGGGTGA
 GCGGGGCCCACCTGCCAGCTCAGGGATTGGCGGGCATGTTACCCCTCAGGGATTGGCG
 GGCGGAAGTCCCAGCCCTGCGCGCTGAGGGCCGCCAGCAGCACTGGCGT

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FIGURE 23

MSQFEMDTYAKSHDLMMSGFWNACYDMLMSSGQRQWERAQSRRAFQELVLEPAQRRARLEG
RYTAVLKQQATQHSMALLHWGALWRQLASPCGAWLRTPIPRWKLSSAETYSRMRLKLVPN
HHFDPHLEASALRDNLGEVPLPTEEASLPLAVTKEAKVSTPPELLQEDQLGEDELAELETP
MEAAELDEQREKLVLSAECQLVTVVAVVPGLEVTTQNVFYDGSTERVETEEGIGYDFRRP
LAQLREVHLRRFNLRRSALELFIDQANYFLNFPCVGTTPVSSPSQTPRPQPGPIPHTQV
RNQVYSWLLRLRPPSQGYLSSRSPQEMLRASGLTQKVWQREISNFEYLMQLNTIAGRKYNDL
SQYPVFPWVLQDYVSPTLDLSNPNAVFRDLISKPIGVVNPKHAQLVREKYESFEDPAGTIDKFH
YGTHYSNAAGVMHYLIRVEPFTSLHVQLQSGRFDCSDRQFHGSVAIAWQARLESADVKE
EFFYFPDFLENQNGFDLGCLQLTNEKGVDVVLPPWASSPEDFIQQHRQALESEYVSAHLHEW
IDLIFGYKQRGPAAEAEALNVFYCTYEGAVDLDHVTDERERKALEGIISNFGQTPCQLLKEP
HPTRLSAEEAAHRLARLDTNSPSIFQHLDLKAFFAEVTVSASGLLGHWSLPYDRNISNYF
SFSKDPTMGSHKTQRLLSGPWPGSGVSGQALAVAPDGKLLFSGGHWDGSLRVTA
SQLSCHLDVVTCLALDTCGIYLISGSRDTTCMVWRLLHQGLSVGLAPKPVQVLYGHGA
CVAISTELDMAVSGSEDTVIIHTVRRGQFVAALRPLGATFPGP
WERPGAQVTVSLHLYSNGKLRASLPLAEQPTALT
PPLPMKVAIRSVAVTKERSHVLVGL
GETEYNPTEAR

FIGURE 24

CGGACGCGTGGCGGACGCGTGGGGCTGTGAGAAAGTGCCAATAAACATCATGCAACCC
CACGGCCCACCTTGTGAACTCCTCGTGCCCAGGGCTGATGTGCGTCTTCCAGGGCTACTCAT
CCAAAGGCCTAATCCAACGTTCTGTCTTCAATCTGCAAATCTATGGGGCCTGGGGCTCTTC
TGGACCCCTTAACGGGTACTGGCCCTGGCCAATGCGTCCTCGCTGGAGCCTTGCCTCCTT
CTACTGGGCCTTCCACAAGCCCCAGGACATCCCTACCTCCCTTAATCTCTGCCTTCATCC
GCACACTCCGTTACCAACTGGTCATTGGCATTGGAGCCCTACCTGACCCTGTGCAG
ATAGCCCAGGTACATTGGAGTATATTGACCACAAGCTCAGAGGAGTGCAGAACCCGTAGC
CCGCTGCATCATGTGCTGTTCAAGTGCTGCCTCTGGTGTCTGGAAAAATTATCAAGTTCC
TAAACCGCAATGCATACATCATGATGCCATCTACGGGAAGAATTCTGTGTCTCAGCCAAA
AATGCCGTTATGCTACTCATGCCAACATTGTCAAGGTGGTCGTCTGGACAAAGTCACAGA
CCTGCTGCTGTTCTTGGAAAGCTGCTGGTGGTCGGAGCGTGGGGCTCTGTCCTCTTT
TTTCTCCGGTCGCATCCGGGCTGGTAAAGACTTAAGAGCCCCACCTCAACTATTAC
TGGCTGCCCATCATGACCTCCATCCTGGGGCTATGTCATGCCAGCGGCTTCTCAGCGT
TTCCGGCATGTGTGGACACGCTCTCCTCTGCTTCTGGAAAGACCTGGAGCGGAACAACG
GCTCCCTGGACCGGCCACTACATGTCCAAGAGCCTCTAAAGATTCTGGCAAGAAGAAC
GAGGCGCCCGGACAACAAGAAGAGGAAGTGACAGCTCCGGCCCTGATCCAGGACTGC
ACCCCACCCCACCGTCCAGCCATCCAACCTCACTCGCCTTACAGGTCTCCATTGTGGT
AAAAAAAGTTTAGGCCAGGCGCCGTGGCTACGCCGTAACTCAACACTTGAGAGGCTG
AGGCGGGCGGATCACCTGAGTCAGGAGTTCGAGACCAGCCTGGCAACATGGTGAACCTCC
GTCTCTATTAAAAATCAAAAATTAGCCGAGAGTGGTGGCATGCACCTGTATCCCAGCTAC
TCGGGAGGCTGAGGCAGGGAGAATCGCTGAACCCGGGAGGCAGAGGTGCACTGAGCCGAGA
TCGCGCCACTGCACTCCAACCTGGGTGACAGACTCTGTCTCCAAAACAAAACAAACAA
AAAGATTATTAAAGATATTGTAACTC

FIGURE 25

RTRGRTRGGCEKVPINTSCNPTAHLVNSSCPGLMCVFQGYSSKGLIQRSVFNLQIYGVLGLF
WTLNWVLALGQCVLAGAFASFYWAFHKPQDIPTFPLISAFIRTLRYHTGSLAFGALILTLVQ
IARVILEYIDHKLRGVQNPVARCIMCCFKCCLWCLEKFIKFLNRNAYIMIAIYGNFCVSAK
NAFMLLMRNIVRVVVLVDKVTDLFFFGKLLVVGGVGVLSSFFSGRIPGLGKDFKSPHLNYY
WLPIMTSILGAYVIASGFFSVFGMCVDTLFLCFLEDLERNNNGSLDRPYYMSKSLKILGKKN
EAPPDNKKRKK

FIGURE 26

GAGTCTTGACCGCCGGGCTTTGGTACCTCAGCGAGCGCCAGCGTCGGCCGGT
GGCTATGTTCGTGTCGATTCCGAAAGAGTTCTACGAGGTGGCCAGAGCCAGAGGTCC
TTCTCTCGTGGCTCGACGTGGATGCTCTGTGCGTCAAGATCCTCAGGCCTTGTTC
CAGTGTGACCACGTCAATATACTGGTCCAGTTCTGGGTGGCAAGAACACTGAAACTGC
ATTCTTGAGCATAAAGAACAGTTCATTTATTCTCATAAACTGTGGAGCTAATGTAG
ACCTATTGGATATTCTCAACCTGATGAAGACACTATATTCTTGACTCCCATTAGG
CCAGTCATGTCGTCAATGTATACAACGATAACCCAGATCAAATTACTCATTAAACAAGATGA
TGACCTTGAAAGTTCCCGCTATGAAGACATCTCAGGGATGAAGAGGAGGATGAAGAGCATT
CAGGAAATGACAGTGTGGTCAGAGCCTCTGAGAACGCGCACACGTTAGAACAGGAGATA
GTGGAGCAAACCATGCGGAGGAGGCAGCGCGAGAGTGGAGGCCGGAGAACAGACATCCT
CTTGACTACGAGCAGTATGAATATCATGGACATCGTCAGCCATGGTGTGACTGG
CTTGGATGCTGTCAGGACCTGAATGACATGCTGTGGTGGCCATGTTGGACTAACAGAC
CAGTGGTGCAAGACAAGATCACTCAAATGAAATACGTGACTGATGTTGGTGCCTGCAGCG
CCACGTTCCGCCACAACCACCGAACGAGGATGAGAACACACTCTCCGTGGACTGCA
CACGGATCTCCTTGAGTATGACCTCCGCCTGGTGTCTACCAGCACTGGTCCCTCCATGAC
AGCCTGTGCAACACCAAGCTATACCGCAGCCAGGTTCAAGCTGTGGTGTGCATGGACAGAA
CGGGCTCAGGAGTTCCGTGCAGACATGGTCTTCCCTGAAGCAGGTGAAGCAGAACAGTCC
AGGCCATGGACATCTCCTGAAGGAGAATTGCGGGAAATGATTGAAGAGTCTGCAAATAAA
TTTGGGATGAAGGACATGCGCGTGCAGACTTTCAGCATTCAATTGGGTTCAAGCACAAAGTT
TCTGGCCAGCGACGTGGTCTTGCCACCATGTCTTGATGGAGAGCCCCGAGAACGGATGGCT
CAGGGACAGATCACTCATCCAGGCTCTGGACAGCCTCTCCAGGAGTAACCTGGACAGCTG
TACCATGGCCTGGAACCTGCCAAGAACGAGCTGCGAGCCACCCAGCAGACCATTGCCAGCTG
CTTGCACCAACCTCGTCATCTCCAGGGCCTTCCTGTACTGCTCTCATGGAGGGCAC
TCCAGATGTCATGCTGTTCTTAGGCCGGCATCCCTAACGCTGCTCAGCAAACACCTGCTCA
AGTCCTTGTGTTGACAAAGAACCGCGCTGCAAACGCTGCTGCCCTGGTGTGGCTGCC
CCCCTGAGCATGGAGCATGGCACAGTGACCGTGGTGGCATCCCCCAGAGACCGACAGCTC
GGACAGGAAGAACCTTTGGAGGGCGTTGAGAAGGCAGCGAAAGCACCAGCTCCCGA
TGCTGCACAACCATTGACCTCTCAGTAATTGAGCTGAAAGCTGAGGATGGAGCAAGTT
CTGGACGCACCTATTCCCTCTGTCCTAGGAATTGATTGAGTATGGACATGATTGAGATGTAGAACCCATT
TATGTAACTGGCTTCAATTAGATTGTAAGTTATGGACATGATTGAGATGTAGAACCCATT
TTTATTAAATAAAATGCTTATTAGGAAA

FIGURE 27

MFVSDFRKEFYEVVQSQRVLLFVASDVLACACKILQALFQCDHVQYTLVPVSGWQELETAFL
LEHKEQFHYFILINCGANVDLLDILQPDEDTIFFVCDSHRPVNPNVYNDTQIKLLIKQDDD
LEVPAYEDIFRDEEEDEEHSGNDSDGSEPEKTRLEEEIVEQTMRRQRREWEARRDILF
DYEQYEYHGTSSAMVMFELAWMLSKDLDMLWWAIVGLTDQWVQDKITQMKYVTDVGVLQRH
VSRHNHRNEDEENTLSVDCTRISFEYDLRLVLYQHWSLHDSDLNTSYTAARFKLWSVHGQKR
LQEFLADMGLPLKQVKQKFQAMDISLKENLREMIEESANKFGMKDMRVQTFSIHFGFKHKFL
ASDVVFATMSLMESPEKDGSQTDHFIQALDSLRSNLDKLYHGLELAKQLRATQQTIASCL
CTNLVISQGPFLYCSLMEGTPDVMLFSRPASLSLLSKHLLKSFVCSTKNRRCKLLPLVMAAP
LSMEHGTVTVVGIPPETDSSDRKNFFGRAFEKAAESTSSRMLHNHFDLSVIELKAEDRSKFL
DALISLLS

FIGURE 28

GTACCTCAGCGCGAGCGCCAGCGTCCGGCCGCCGTGGCTATGNTCGTGTCCGATTCCGCA
AAGAGTTCTACGAGGTGGTCCAGAGCCAGAGGGTCCTCTTCGTGGCCTCGGANGTGGAT
GCTCTGTGTGCGTGAAAGATCCTTCAGGCCTTGTCCAGTGTGACCANGTGAATATANGCT
GGTTCCAGTTCTGGGTGGCAAGAACCTGAAACTGCATTCTTGAGCATAAAGAACAGTTTC
ATTATTTATTCTCATAAACTGTGGAGCTAATGTAGACCTATTGGATATTCTTCAACCTGAT
GAAGACACTATATTCTTGTGTGACACCCATAGGCCAGTCAATGTTGTCAATGTATAACAA
CGATAACCC

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CAGGAACCCTCTTTGGGTCTGGATTGGACCCCTTCCAGTACCATTTCTAGTGAAC
 CACGAAGGGACGATACCAGAAAACACCCTCAACCCAAAGGAAATAGACTACAGCCCCAATTG
 GCTGACTTTGGCTATAGAAAAAAGAAAGGAACGAAAAGAGACAGTTTTGGAAAGCTAA
 GTCTCCCTTATCGAGTCAGAAACCCCCCTTCTTGAGCTATTACAGCTTTAACATT
 GAGTAAAGTACGCTCCGGTCACCATGGTGACAGCCCTGGTCCCCTGGCAGCGCTC
 CTGCTCTTCTCCTGATGTGAGATCGTATGGTGGAGCTCACCTTGACAGAGCTGTGGC
 CAGCGGCTGCCAACGGTGTGACTCTGAGGACCCCTGGATCCTGCCATGTATCCTCAG
 CCTCTCCTCCGGCCGCCCCACGCCCTGGCTGAGATCAGACCCATACATTAATACACCAC
 CTGAAGGGTACAAAGGGGACCCAGGCCAATGGGCTGCCAGGGTACATGGGAGGGAGGG
 TCCCCAAGGGAGCCTGGCCCTAGGGCAGCAAGGGTACAGGGGGAGATGGGAGGCCCG
 GCGCCCCGTGCCAGAACGCCTTCTCGCCTCTCAGTGGGCGCAAGACGCCCTGCACAGC
 GGCAGGACTCCAGACGCTGCTTCGAAGGGCTTTGTGAAACCTGATGGGCTTTGA
 CATGGCAGCCGGCAGTTGCTCTCCCTGCGTGGCATCTACTTCTCAGCCTCAATGTGC
 ACAGCTGAAATACAAGGAGACGTACGTACATTATGCATAACCAGAAAGAGGCTGTAC
 CTGTACCGCAGCCCAGCGAGCGCAGCATCATGCAGAGCCAGAGTGTGATGGTAC
 CTACGGGACCGCGTCTGGGTGCGGCTTCAAGGCCAGCGAGAACGCCATCTACAGCA
 ACGACTTCGACACCTACATCACCTCAGGGCCACCTCATCAAGGCCAGGGAGGACT**TGA**GGG
 CCTCTGGGCCACCCCTCCGGCTGGAGAGCTCAGGTGCTGGTCCCCTGCAGGGCTCAG
 TTTGCACTGCTGTGAAGCAGGAAGGCCAGGGAGGTCCCCGGGACCTGGCATTCTGGGAGA
 CCCTGCTTCTATCTTGCTGCCATCATCCCTCCAGCCTATTCTGCTCCTCTCTCT
 TGGACCTATTAAAGAAGCTTGCTAACCTAAATATCTAGAACTTCCAGCCTCGTAGCCC
 AGCACTTCTCAAACCTGGAAATGCATGCGAATCACCGGGGTTCTGTAAATGCAGATTCT
 GACTCAGCAGGTCTGAGTGGGTCAGGATTCTGTGTTCTCATATGTTCTGGTATGCTG
 ATGGGGTCAGTCTATGAACACACTGGAGCAACCAGGTTCTAGGACTTCTCAATATTCTAG
 TACTTCTGAACATTCTGGAATCTCCACATTCTAGAATTCTCCAAACATTTTTTCT
 TGAGACAGAGCTTGCTCTGTTGCCAGGCTAGAGTGCAGTGGTCAATCTCAGTTCACTGC
 AACCTCTGCCCTCCGGGTTCAAGCGATTCTCTGCCCTCAGCCTCCCTAGGGTGGGATTAC
 AGGCCGCTGCTACCATGCCCTGGTAATTGGTATTAGTAGAGATGGGTTTCAACCATA
 TTGGCCAGGCTGGTCTGAACCTCTGACTTCAGGTGACCCACCGCCTGGCCTCTCAAAT
 GCTGGGATTACAGGTGTGAGCCACCGTGCTGGCAATTCCAAACATTCTTAAATTCTCAT
 CCCTCCAGGGCTCCCCGTGCTATGTTCTTACCCCTTCCCTCTCTGGTCTCAGGCC
 TGCACCACTGCCAGGCCACCGTTCATTATTCTATTAAACACTGAGCACTCACTGTGCT
 GGGTCCCAGGGAAAGGGTGAGGGGGTCAGACACAGGCCCTGCCCTCAGTGACTGGCA
 GTCCAGGCCAGGCCAGGGAGAGATGTGATAGGTTAAAGCAGACCCAGAGCTCATGGG
 GCCTGTGTTCTGGGTCTCAGGTGCTGCTGGTCTCCATTACCCACTGCTCCCCAAGGCTGG
 TGGACGGGGTCCGGTGGCAGGGCAGGTATCTCTTCCCTCATCCACCTGCCAG
 TGCTCATCGTTACAGCAAACCCAGGGGCTTGGCCAGGTCAAGGGTTCTGTGAGGAGAGG
 ACCCAGGAGTGTGGGGGATTGGGGGATCTGGGGGCTTCAAGGCTTCTCCAGGCTTAC
 TAGCTCTCCCCACAGCTGATACGGCATCTCGAGAGAACCTGCCCTCCTCACTGGGATCCC
 CTTCTGCCCTCCCAGGGCTCTGCCAGGGCTCCAGCTGCCCTCAGACACTGATGTC
 GAACCTCCGTTCTCCCAGGGCTCCAGCTGCCCTCAGACACTGATGTC
 CTCTGCCCTCATGCCCTCTCAGGCCAGTGGCCACTCTCCAGGCTTATCAAGGTG
 CTAAGGCCCCGGTGGCAGCTCTCGTCTCAGAGCCCTCCCGGCCCTGGTCTGCCTTAC
 AAACACCTGCAGGAGAAGGGCACGGAAGGCCAGGCTTACAGGCCCTCAGCAGGTCTGGG
 AGCTAGAGCAAAGGAGGGACCTCAGGCCTCCAGGTGGCCTGCCCTCTCCAGGGAGG
 GTTCCCTAGCCTTCAAACCCAGGTGGCCTGCCCTCTCCAGGGAGGAGGCCCTCGC
 CCATTGGTCTCATGCAGACTCTGGGCTGAGGTGCCCGGGGGTGTCTGGTCTGC
 AGCCGAGGGAGGCCGTGGCTCCATGCCAGATGACGGAAACAGGGTCTGACCAAGTGC
 AGACCTGTGCTATAAACCAACCCCTGCCATGCCCTGATCTGCCCTGCCACGCCCTGCC
 GTCCAGCATGATTAAAGAATGCTGTCTCCTCTTGAAAAA

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FIGURE 30

MVTAALGPVWAALLFLLMCEIRMVELTFDRAVASGCQRCCDSEDPLDPAHVSSASSSGRPH
ALPEIRPYINITILKGDKDPGPMGLPGYMGREGPQGEPGPQGSKGDKGEMGSPGAPCQKRF
FAFSVGRKTALHSGEDFQTLLFERVFVNLDGCFDMATGQFAAPLRGIYFFSLNVHSWNYKET
YVHIMHNQKEAVILYAQPSERSIMQSQSVMMLAYGDRVWVRLFKRQRENAIYSNDFDTYIT
FSGHLIKAEDD

Important features:

Signal peptide:

amino acids 1-20

N-glycosylation site.

amino acids 72-75

C1q domain proteins.

amino acids 144-178, 78-111 and 84-117

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FIGURE 31

ACTCGAACGCAGTTGCTTCGGGACCCAGGACCCCCTCGGGCCCGACCCGCCAGGAAAGACTG
AGGCCGCGGCTGCCCGCCGCTCCCTGCGCCGCCGCCCTCCGGGACAGAAGATGTG
CTCCAGGGTCCCTCTGCTGCTGCCCTGCTACTGGCCCTGGGGCTGGGTGAGG
GCTGCCATCCGGCTGCCAGTGAGCCACAGACAGTCTTCTGCACTGCCGCCAGGGG
ACCACGGTCCCCGAGACGTGCCACCCGACACGGTGGGCTGTACGTCTTGAGAACGGCAT
CACCATGCTCGACGCAGGCAGCTTGCCGGCTGCCGGCTGAGCTCCTGGACCTGTAC
AGAACCCAGATGCCAGCCTGCCAGCAGGGCTTCCAGCCACTGCCAACCTCAGAACCTG
GACCTGACGGCAACAGGCTGCATGAAATCACCAATGAGAACCTTCCGTGGCCTGCGGCCT
CGAGGCCCTCACCTGGCAAGAACCGCATCGCCACATCCAGCCTGGCTGCCTCGACACGC
TCGACCGCCTCTGGAGCTCAAGCTGCAGGACAACGAGCTGCCGGACTGCCCGCTGCGC
CTGCCCCGCTGCTGCTGGACCTCAGCCACAACAGCCTCTGGCCTGGAGGCCGGCAT
CCTGGACACTGCCAACGTGGAGGCCTGCCGGCTGGCTGGCTGGGCTGCAGCAGCTGGACG
AGGGCTCTCAGCCGTTGCGCAACCTCACGACCTGGATGTGTCGACAACACCAGCTGGAG
CGAGTGCCACCTGTGATCGAGGCCCTCCGGGCTGACGCCCTGCCGGCTGGAGGCCAACAC
CCGCATTGCCAGCTGCCGGAGGACCTGCCGGCTGGCTGCCCTGCCAGGAGCTGGATG
TGAGCAACCTAACGCTGCAGGCCCTGCCGGACCTCTCGGGCTCTCCCCGGCTGGGG
CTGCTGGCAGCTGCCCAACCCCTCACTGCGTGTGCCCTGAGCTGGTTGGCCACTTCCG
GGTGCAGAGGCCACGTACACTGCCAGCCCTGAGGAGACGCCCTGCCACTTCCG
AGAACGCTGCCGGCTGCTCTGGAGCTTGACTACGCCGACTTGGCTGCCAGGCCACC
ACACAGCCACAGTCCCACCGAGGCCGTGGTGCAGGGACAGCCTTGTCTTAG
CTTGGCTCCTACCTGGCTAGCCCCACAGGCCGGCCACTGAGGCCAGGCCCTCCA
CTGCCCGACCGACTGTAGGGCTGTCCCCAGGCCAGGACTGCCACCGTCCACCTGCC
AATGGGGCACATGCCACCTGGGACACGGCACCACCTGGCTGCTTGTGCCCGAAGGCTT
CACGGCCTGACTGTGAGAGCCAGATGGGCAGGGACACGCCAGCCCTACACCAGTC
CGCCGAGGCCACCACGGTCCCTGACCTGGCATCGAGCCGTGAGGCCACCTCCCTGCC
GTGGGCTGAGCGTACCTCAGGGAGCTCCGTGCAGCTCAGGAGCCTCCGTCACTTA
TCGCAACCTATGGGCCCTGATAAGCGGCTGGTACGCTGCACTGCCCTCGCTCG
AGTACACGGTACCCAGCTGCCAACGCCACTTACTCCGTCTGTGATGCCCTGGG
CCCCGGCGGGTGCCGGAGGGCGAGGAGGCCAGGACTGCCACCCAGGCCCTGCC
CTCCAACCACGCCCAAGTCACCCAGGCCGAGGGCAACCTGCCCTCTCATGCC
CCCTGGCCGGGTGCTCCTGGCCGCTGGCTGCCGTGGGAGGCCAGCTACTGTG
GGGGCCATGGCAGCGGCTCAGGACAAAGGGCAGGTGGGCCAGGGCAAGG
GGAACGGAGGGAGTGAAGGTCCCTGGAGGCCAGGCCAGGGCAACAGAGGGCG
AGGCCCTGCCAGCGGTCTGAGTGTGAGGTGCCACTATGGCTTCCAGGGCTGCC
CAGTCACCCCTCCACGCAAAGCCCTACATCTAAAGCCAGAGAGAGACAGGGCAGCT
GGCTCTCAGCCAGTGAGATGGCCAGGCCCTCTGCTGCCACACCACGTAAGTCTCAGT
CAACCTGGGATGTGCAAGACAGGGCTGTGACCAAGCTGCCCTGTTCCCTGGA
CCTCGGTCTCCTCATCTGTGAGATGCTGTGGCCAGCTGACGAGGCCAACG
CGAGTGCCTATGAGGACAGTGTCCGCCCTGCCAACGTGCAGTCCCTGGCACGGCG
GCCCTGCCATGTGCTGGTAACGCATGCCCTGGCTCTGCTGGCTCTCCACTCCAGGG
CCCTGGGGCCAGTGAAGGAAGCTCCGGAAAGAGCAGAGGGAGAGCGGGTAGGG
TGACTCTAGTCTTGGCCCCAGGAAGCGAAGGAACAAAGAAACTGGAAAGGAAGATG
GGAACATGTTTGCTTTAAAATATATATTATAAGAGATCCTTCCATTATTCTG
GGAAGATGTTTCAAACCTAGAGACAAGGACTTGGTTTGTAAGACAAACGATGATATG
AAGGCCTTGTAAAGAAAAATAAAAGATGAAGTGTGAAA

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FIGURE 32

MCSRVPLLLPLLLLALGPGVQGCPSCQCSQPQTVFCTARQGTTVPRDVPPDTVGLYVFEN
GITMLDAGSFAGLPGLQLLDLSQNQIASLPSGVFQPLANLSNLDLTANRLHEITNETFRGLR
RLERLYLGKNRIRHIQPGAFDTLDRLLLELKLDNELRALPPLRLPRLLLDLSHNSLLALEP
GILDGTANVEALRLAGLGLQQQLDEGLFSRLRNLDLDVSDNQLERVPPVIRGLRGLTRLRLAG
NTRIAQLRPEDLAGLAALQELDVSNLSQLPGDLSGLFPRLRLLAAARNPFNCVCPLSWFG
PWVRESHVTLASPEETRCHFPPKNAGRLLLEDYADFGCPATTTATVPTTRPVVREPTALS
SSLAPTWLSPTAPATEAPSPPSTAPPTVGPVPQPQDCPPSTCLNGGTCHLGTRHHLACLCPE
GFTGLYCESQMGGTTRPSPTVTPRPPRSLTGIEPVSPSLRVGLQRYLQGSSVQLRSLRL
TYRNLSGPDKRLVTLRLPASLAEYTWTQLRPNATYSVCVMPGGRVPEGEEACGEAHTPPA
VHSNHAPVTQAREGNLPLLIAPALAAVLLAALAAVGAAVCVRGRAMAAAAQDKGVGPGAG
PLELEGVKVPLEPGPKATEGGEALPSGSECEVPLMGFPGPGLQSPLHAKPYI

FIGURE 33

GAATCATCCACGCACCTGCAGCTCTGCTGAGAGAGGTGCAAGCCGTGGGGTTTGAGCTCAT
 CTTCATCATTATGAGGAATAAGTGGTAAATCCTGGAAATACA**A**TGAGACTCATCAG
 AAACATTACATATTTGTAGTATTGTATGACAGCAGAGGGTGTCTCCAGAGCTGCCAG
 AAGAAAGGGAACTGATGACCAACTGCTCCAACATGTCTTAAGAAAGTTCCCGCAGACTTG
 ACCCCAGCCACAACGACACTGGATTATCCTATAACCTCCTTTCAACTCCAGAGTTCAGA
 TTTTCATTCTGTCTCCAAAATGAGAGTTTGATTCTATGCCATAACAGAATTCAACAGCTGG
 ATCTCAAAACCTTGAATTCAACAAGGGAGTTAACAGATATTAGATTGTCTAATAACAGACTG
 AAGAGTGTAACTTGGTATTACTGGCAGGGTCTCAGGTATTAGATCTTCTTTAATGACTT
 TGACACCAGCTATCTGTGAGGAAGCTGGCACACATGTACACCTGGAAATCTTAGGTTGA
 GTGGGGCAAAAATCAAACATGAGATTCCAGAAAATTGCTCATCTGCATCTAAATACTGTC
 TTCTTAGGATTAGAACTCTTCATTATGAAGAAGGTAGCCTGCCATCTTAAACACAAC
 AAAACTGCACATTGTTTACCAATGGACACAAATTCTGGGTTCTTGTGATGGAATCA
 AGACTCAAAATATTAGAAATGACAATATAGATGGCAAAGCCAATTGTAAGTTATGAA
 ATGCAACGAAATCTTAGTTAGAAAATGTAAGACATCGGTTCTATTGCTTAATAAGTTGA
 TTCAGATCCGAAATGTGACTTTGGTGGTAAGGTTATCTGACCACAATTCTTGACTAC
 TCAAATACTGTAATGAGAACTATAAAATTGGAGCATGTACATTCTAGAGTGTCTTACATTCA
 ACAGGATAAAATCTATTGCTTTGACCAAAATGGACATAGAAAACCTGACAATATCAAATG
 CACAAATGCCACACATGCTTCCGAATTATCCTACGAAATTCAAATTTAAATTGGCC
 AATAATATCTAACAGACGAGTTAAAAGAACATATCCAACACTGCCACTTGAAAACCTCT
 CATTGGAATGGAATAAAACTGGAGACACTTCTTAGTAAGTTGCTTGCTAACACACAC
 CCTTGGAACACTGGATCTGAGTCAAAATCTATTACAACATAAAATGATGAAAATTGCTCA
 TGGCCAGAAACTGTGGTCAATATGAATCTGTATACAATAAATTGTCGATTCTGTCTCAG
 GTGCTGCCCCAAAGTATTCAAATACTTGACCTAAATAAACCAAAACTGTACACTA
 AAGAGACTATTCTGATGGCCTACGAGAACTAAATATTGCTATTCTAATTCTAACTGAT
 CTCCCTGGATGCAGTCATTCTAGACTTCAGTTCTGAACATTGAAATGAACTTCATCT
 CAGCCCACATCTGGATTGTCAGAGCTGCCAGGAAGTTAAACTCTAAATGCGGGAGAA
 ATCCATTCCGGTGTACCTGTGAATTAAAAATTCTATTGAAACATATTGAGGTC
 ATGATGGTTGGATGGTCAGATTCTACACCTGTGAATACCCCTTAAACCAAGGGAACTAG
 GTTAAAAGACGTTCATCTCCACGAATTATCTTGCAACACAGCTCTGTTGATTGTCACCA
 TGTTATTATGCTAGTTCTGGGTTGGCTGTGCCCCCTCTGCTCTCCACTTGTATCTGCC
 TGGTATCTCAGGATGCTAGGTCAATGCACACAAACATGGCACAGGGTAGGAAAACAACCA
 AGAACAACTCAAGAGAAATGTCGATTCCACGCATTATTCTACAGTGAACATGATTCTC
 TGTGGGTGAAGAATGAATTGATCCCCAATCTAGAGAAGGAAGATGGTTCTATCTGATTG
 CTTATGAAAGCTACTTGACCCCTGGCAAAAGCTTAGTGAAGGATTCTGAACTTCATG
 GAAAAGCTATAAGTCCATCTTGTTGCTCCAAACTTGTCCAGAATGAGTGGTGCCATT
 ATGAATTCTACTTTGCCACCAACATCTCTTCCATTCTGATGAAACATGATTCTTATC
 TTACTGGAAACCCATTCCATTCTGATCTCCACCGGTATCATAAACTGAAAGCTCTCCT
 GGAAAAAAAGCATCTTGGAAATGGCCCAAGGATAGGCGTAAATGTTGCTTCTGGCAA
 ACCTTCGAGCTGCTTAAATGTTAATGTTAATGCTGAGGTTCTACAACTCTCTGATGAGA
 TTCACAGAGTTAAATGAAGAGTCTCGAGGTTCTACAACTACACTGTTGGGATGTAATTGATA
AT**AAA**ATCCACAGCTTGGGAAGTGGGGACCACATACACTGTTGGGATGTAATTGATA
 CAACCTTATGATGGCAATTGACAATTATTAAATAAAAATGGTTATTCCCTTCTGGCAA
 TCAGTTCTAGAAGGATTCTAAGAATGTATCCTATAGAAACACCTCACAAGTTATAAGG
 GCTTATGGAAAAGGTGTTCATCCAGGATTGTTATAATCATGAAAATGTGGCCAGGTGC
 AGTGGCTACTCTGTAATCCCAGCACTATGGGAGGCCAGGTGACCCACGAGGTCAA
 GAGATGGGAGACCATCTGGCCAACATGGTAAACCTGTCTACTAAAAATACAAAAATT
 GCTGGGCGTGTGGTCACGCTGTAGTCCCAGCTACTTGGGAGGCTGAGGCGAGGAGAATCG
 CTTGAACCCGGAGGTGGCAGTTGAGCTGAGATCGAGCCACTGCACTCCAGCCTGGT
 GACAGAGCGAGACTCCATCTCAAAAAAAGAAAAAAAGAAAAAAATGGAAAACATCC
 TCATGGCCACAAAATAGGCTTAATTCAATAATTAGTACATTATGTAATATAATT
 CATGCCACTAAAAGAATAAGGTAGCTGATATTCTCTGGTATGAAAAACATATTAAAT
 GTTATAAAACTATTAGTTGGTCAAAACTAATTGTGGTTTGCCTTGAAATGGATTGAA
 ATAAAAGTGTAAAGAAATCTATACCAGATGTAGTAACAGTGGTTGGGTCTGGGAGGTTGGA
 TTACAGGGAGCATTGATTCTATGTTGTTATAATTGTTGAATTGTTAGAATG
 ATCTGTATTCTTTATAAGTAGAAAAAAATAAAGATAGTTTACAGCCT

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FIGURE 34

MRLIRNIYIFCSIVMTAEGDAPELPEERELMTNCNSMSLRKVPADLTPATTLDSLNSYNLLFQ
LQSSDFHSVSKRVLILCHNRIQQLDLKTFEFNKELRYLDLSNNRLKSVTWYLLAGLRYLDL
SFNDFDTMPICEEAGNMSHLEILGLSGAKIQKSDFQKIAHLHLNTVFLGRTLPHYEEGSLP
ILNTTKLHIVLPMDTNFWVLLRDGIKTSKILEMTNIDGKSQFVSYEMQRNLSLENAKTSVLL
LNKV DLLWDDLFLILQFVWHTSVEHFQIRNVTFGGKAYLDHNSFDYSNTVMRTIKLEHVHFR
VFYIQQDKIYLLLTKMDIENLTISNAQMPHMLFPNYPTKFQYLNFA NNLTDLFKRTIQLP
HLKTLILNGNKLETLSVSCFANNTPLEHLDLSQNLLQHKNDENC SWPETVVNMNLSYNKLS
DSVFRCLPKSIQILDNNNQIQTVPKETIHLMALRELNIAFNFLTDLPGCSHFSRLSVLNIE
MNFI LSPSLDFVQSCQEVKTLNAGRNPFRCTCELKNFIQLETYSEVMMVGWSDSYTCEYPLN
LRGTRLKDVLHHELSCNTALLI VTIVVIMLVLGLAVAF CCLHF DLPWYLRMLGQCTQTWHRV
RKTTQEQLKRNVRFHAFISYSEHDSLWVKNELIPNLEKEDGSILICLYESYFDPGKSISENI
VSFIEKSYKSIFVLS PN FVQNEWCHYEFYFAHHNLFHENS DHI I LILLEPIPFYCIPTRYHK
LKALLEKKAYLEWP KDRRKCG LF WANLRAA INVNVLATREMYELQTFTELNEESRGSTISLM
RTDCL

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FIGURE 35A

GGGGGCTTCTGGCTGCTGGAACACCTGCCTCCAAGGACC GGCTCGGAGGGT
 CGCCGGAAAGGGAGGAAGAAGGAAGGGCGGGCCCGCCCCCTGCGCCCGCCCCGCGCCT
 CTGCGGCCCTGTCCGCCCGCCCAGCCCAGCCCAGCCCGCGGGTACACCGCA
 GCCAGCCGGCCCTCCCGCCCAAGCGCGCCGCTCTGCTGTGCCCTGCGCCCTGCCCG
 CGCCAGCTCTGCGCCCGCAGCCCGCCCGCCGGTACCGTGACCGTACCGCTGCCCTGGCG
 CGGGCGGAGCAGGCATGTCCCGCCCGGGACCGCTACCCAGCGCTGCCCTGGTGCCT
 GGCAGTGACCTGGCCGGGTGGAGCCCAGGGCGCAGCCCTGAGGACCTGATTATTACG
 GGCAGGAGATCTGGAGCCGGAGCCCTACTACGCGGCCGGAGCCCGAGCTCGAGACCTC
 TCTCCGCCGCTGCCCTGCCGGCCGGAGGGAGTGGAGCAGCGCCCGAGGAGCCCAGGCC
 GCCCAAGAGGGCACCAAGCCCAAGAAAGCTCCAAGAGGGAGAAGTCGGCTCCGGAGCCGC
 CTCCACCAGGTAAACACAGCAACAAAAAGTTATGAGAACCAAGAGCTCTGAGAAGGCTGCC
 AACGATGATCACAGTGTCCGTGGCCCGTGAAGATGTCAGAGAGAGTTGCCACCTCTGG
 TCTGGAAACCTTAAAATCACAGACTCCAGCTCCATGCCCTCACGGTGAAGCGCTATGCC
 TGGGGCACATCGAGGGAGACTAACATCCAGGCGGGATTAATGAAAATGATTTATGAC
 GGAGCGTGGTGCAGGGAAAGAAATGACCTCCAGCAGTGGATTGAAGTGGATGCTCGGCGCCT
 GACCAGATTCACTGGTGTCACTCACTCAAGGGAGGAACCCCTCTGGCTGAGTGACTGGTGA
 CATCCTATAAGGTATGGTGAGCAATGACAGCCACACGTGGTCACTGTTAAGAATGGATCT
 GGAGACATGATATTGAGGGAAACAGTGAGAAGGGAGATCCCTGTTCAATGAGCTACCCGT
 CCCATGGTGGCCCGTACATCCGATAAACCCCTCAGTCCTGGTTGATAATGGAGCATCT
 GCATGAGAATGGAGATCCTGGCTGCCACTGCCAGATCTAATAATTATCACCGCCGG
 AACGAGATGACCACCACTGATGACCTGGATTTAACGACCAATTATAAGGAAATGCCA
 GTTGATGAAAGTTGTGAATGAAATGTGTCCTAACATCACAGAAATTACAACATTGGAAAAA
 GCCACCAGGGCCTGAAGCTGTATGCTGGAGATCTCAGATCACCCCTGGGAGCATGAAGTC
 GGTGAGCCGAGTTCACTACATCGCGGGGCCACGGCAATGAGGTGCTGGCCGGAGCT
 GCTGCTGCTGGTGCAGTCAGTGGTGTGTCAGGAGTACTTGGCCCGGAATGCGCAGTC
 ACCTGGTGGAGGAGACCGGATTACGTCCTCCCTCCCTCAACCCCGATGGCTACGAGAAG
 GCCTACGAAGGGGGCTGGAGCTGGAGCTGGAGGCTGGTCCCTGGGACGCTGGACCCACGATGGAAT
 TGACATCAACAACAACCTTCCTGATTTAACACGCTGCTCTGGAGGGAGAGGATGACAGA
 ATGCCCCAGGAAAGTCCCAATCACTATATTGCAATCCCTGAGTGGTTCTGTCGGAAAAT
 GCCACGGTGGCTGCCAGACAGAGCAGTCAGTCAGTCCTGGATGGAAAAAATCCCTTTGTGCT
 GGGCGCAACCTGCAGGGCGGGAGCTGGTGGTGCATCCCTACGACCTGGTGCCTGGCTCC
 CCTGGAAAGACGCAGGAACACACCCCCACCCCGATGACAGACGCCGGAGGAGGTGTGCCACACGGAGGA
 TCCTATGCCCTCACACACCGCTCATGACAGACGCCGGAGGAGGTGTGCCACACGGAGGA
 CTTCCAGAAGGAGGAGGGCACTGTCAATGGGGCTCCTGGCACACCGTCGCTGGAAGTCTGA
 ACGATTTAGCTACCTCATACAAACTGCTCGAAGTGTCCATCTACGTGGCTGTGATAAAA
 TACCCACATGAGAGGCCAGCTGCCAGGGAGTGGAGAATAACCGGAATCTCTGATCGTGT
 CATGGAGCAGGTTCATCGTGGCATTAAAGGCTTGGTAGAGGATTACATGAAAAGGAATCC
 CAAACGCCATTATCTCGTAGAAGGCATTAACCATGACATCCGAACAGCCAACGATGGGAT
 TACTGGCGCTCCTGAACCCCTGGAGAGTATGTGGTACAGCAAAGGCCGAAGGTTTACTGC
 ATCCACCAAGAACTGTATGGTGGCTATGACATGGGGCCACAAGGTGTACTTCACACTTA
 GCAAAACCAACATGCCAGGATCCGAGAGATCATGGAGAAGTGTGGAGCAGCCGTAGC
 CTGCCAGCCAGGCCGTGAAGCTGCCGGGGCGGAAGAGACGACAGCGTGGGTGACCCTCTG
 GGCCCTTGAGACTCGTCTGGACCCATGCAAATTAAACCAACCTGGTAGTAGCTCCATAGTG
 GACTCACTCACTGGTGTGTTCTGTAAATTCAAGAAGTGCCTGGAGAGAGGGTGCATTGTG
 AGGCAGGTCCAAAAGGGAGGCTGGAGGCTGAGGCTGTTTCTTTGTTCCCATTTA
 TCCAAATAACTGGACAGAGCAGCAGAGAAAAGCTGATGGAGTGAGAGAACTCAGCAAGCC
 AACCTGGGAATCAGAGAGAGAAGGAGAAGGAGGGAGCCTGTCGTTAGAGCCTCTGGCTGC

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FIGURE 35B

ATAGAAAAGGATTCTGGTCTTCCCCTGTTGCCTGGCAGCAAGGGTTCCACGTGCATTGC
AATTGCACAGCTAAATTGCAGCATTCCCCAGCTGGCTGTCCCAAATGTACCATTTGA
GATGCTCCCAGCGTCTAACAGAGAACATCCACCCCTCTGGCCCTGGACATTGCAAGCTGCTA
CAAATAAATTCTGTGTTCTTGACAATAGCGTCATTGCCAAGTGCACATCAGTGAGCCTCT
TGAATCTGTTAGTCTCCTTTCAACAAAGGAGTGTGTTAGAAAAGGAGAGAGAGGGCTGA
GATCATTCAAGGAGTTGTTGGGCAGCAAGCATGGAGCTTCTGCACAAATTCTGGTCCATA
AACAAACCCCCAAAGTCCCTGCTGATCCAGTAGCCCTGGAGGTTCCCCAGGTAGGGAGAGCCA
GAGGTGCCAGCCTCCTGAAGGGCCAGAAAATTAGCCTGGATCTCCTCTTTACCTGCTAG
GACTGGAAAGAGCCAGAAGTGGGTGGCCTGAAGCCCTCTCTGCTTGAGGTATTGCCCT
GTGTGGAATTGAGTGCTCATGGGTGGCCTCATATCAGCCTGGAGTTATTTGATATGTA
GAATGCCAGATCTTCAGATTAGGCTAAATGTAATGAAAAACCTCTAGGATTATCTGGAG
CATCAGTTGGGAAGAATTATTGAATTATCTTGCAAGAAAAAAAGTATGTCTCACTTTGTT
AATGTTGCTGCCTCATTGACCTGGAAAAATGAAAAAAAAAAAGCAAATGGTAAGACC
CTTAA

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FIGURE 36

MSRPGTATPALALVLLAVTLAGVGAQGAALEDPDYYGQE IWSREPYYARPEPELETFSPLP
AGPGEEWERRPQEPRPPKRATPKKAPKREKS APEPPPGKHSNKKVMRTKSSEKAANDHS
VRVAREDVRESCPPLGLETLKITDFQLHASTVKRYGLGAHRGRNLNIQAGINENDFYDGAWCA
GRNDLQQWIEVDARRLTRFTGVITQGRNSLWLSDWVTSYKVMVSNDSHTWTVKNGSGDMIF
EGNSEKEIPVLNELPVPMVARYIRINPQSFDNGSICMRMEILGCPLPDPNNYYHRRNEMTT
TDDLDFKHHNYKEMRQLMKVVNEMCPNITRIYNIGKSHQGLKLYAVEISDHGEHEVGEPEF
HYIAGAHGNEVLGRELLLLLVQFVCQEYLARNARIHLVEETRIHVLP SLNPDGYEKAYEGG
SELGGWSLGRWTHDGIDINNNFPDLNTLWEAEDRQNVPRKVPNHYIAIPEWFLSENATVAA
ETRAVIAWMEKIPFVLGGNLQGGELVVAYPYDLVRSPWKTQEHTPTPDDHVFRWLAYSYAST
HRLMTDARRRVCHTEDFQKEEGTVNGASWHTVAGSLNDFSYLHTNCFELSIVVGCDKYPHES
QLPEEWENNRESLIVFMEQVHRGIKGLVRDSSHKGIPNAII SVEGINHDIRTANDGDYWRLL
NPGEYVVTAKAEGFTASTKNCMVGYDMGATRCDFTLSKTNMARIREIMEKFGKQPVSLPARR
LKLRGRKRRQRG

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FIGURE 37

CTAAGAGGACAAG**ATGAGGCCGGCCTCTCATTCTCCTAGCCCTCTGTTCTCCTGGCC**
 AAGCTGCAGGGGATTGGGGATGTGGGACCTCCAATTCCCAGCCCCGGCTCAGCTTTTC
 CCAGGTGTTGACTCCAGCTCCAGCTCAGCTCCAGGTGGCTCCAGCTCCAGCCG
 CAGCTTAGGCAGCGGAGGTTCTGTGCTCCAGTTGTTCCAATTCCACCGGCTCCGTGGATG
 ACCGTGGACCTGCCAGTGCTCTGTTCCCTGCCAGACACCACCTTCCCCTGGACAGAGTG
 GAACGCTTGAATTACAGCTCATGTTCTCAGAAGTTGAGAAAGAACCTTCTAAAGT
 GAGGAAATATGTCCTAAATTAGTGTGATGAAAAGAAACTGTTAAACCTAAGTCCGAA
 TTGACATCATGGAGAAGGATACCATTCTTACACTGAAGTGGACTTCGAGCTGATCAAGGTA
 GAAGTGAAGGAGATGGAAAAACTGGTCATACAGCTGAAGGAGAGTTGGTGAAGGCTCAGA
 AATTGTTGACCAGCTGGAGGTGGAGATAAGAAATATGACTCTTGGTAGAGAAGGCTTGAGA
 CACTAGACAAAAACAATGTCCTGCCATTGCCAGAAATCGTGGCTCTGAAGACCAAGCTG
 AAAGAGTGTGAGGCCTCTAAAGATCAAACACCCCTGTCGCCACCCCTCCACTCCAGG
 GAGCTGTGGTCATGGTGGTGTGGTGAACATCAGCAAACCGTCTGTGGTTAGCTCAACTGGA
 GAGGGTTTCTTATCTATGGTGGCTTGGGATTACTCTCCCAGCATCCAAACAAA
 GGACTGTATTGGGTGGGCCATTGAATAACAGATGGGAGACTGTTGGAGTATTATAGACTGTA
 CAACACACTGGATGATTGCTATTGTATATAATGCTGAGAGTTGGGATCACCTATGGCC
 AAGGTAGTGGTACAGCAGTTACAACAAACATGTACGTCAACATGTACAACACCGGGAAT
 ATTGCCAGAGTTAACCTGACCACCAACACGATTGCTGTGACTCAAACCTCCATTGCTGC
 CTATAATAACCGCTTTCATATGCTAATGTTGCTTGGCAAGATATTGACTTGTGGATG
 AGAATGGATTGTGGTTATTCAACTGAAGCCAGCACTGGTAACATGGTATTAGTAAA
 CTCAATGACACCACACTCAGGTGCTAAACACTTGGTATACCAAGCAGTATAAACCATCTGC
 TTCTAACGCCTTCATGGTATGGGTTCTGTATGCCACCGTACTATGAACACCCAGAACAG
 AAGAGATTTTACTATTATGACACAAACACAGGAAAGAGGGCAAACTAGACATTGTAATG
 CATAAGATGCAGGAAAAAGTGCAGAGCATTAACTATAACCTTTGACCAGAAACTTTATGT
 CTATAACGATGGTTACCTCTGAATTATGATCTTCTGCTTGCAGAAGCCCCAG**TAA**GCTG
 TTTAGGAGTTAGGGTGAAGAGAAAATGTTGTTGAAAAAATAGTCTTCTCCACTTACTTAG
 ATATCTGCAGGGGTGTCTAAAGTGTGTTCTTTGCAAGTGTAGGTGCATAGTCTA
 CCACACTAGAGATCTAGGACATTGCTGTGATTGGTGAAGTCTCTGGGAATCATCTGCCT
 CTTCAAGCGCATTGCAATAAGTCTGTCTAGGGTGGATTGTCAGAGGTCTAGGGCACT
 GTGGGCCTAGTGAAGCCTACTGTGAGGAGGGCTCACTAGAACGCTTAAATTAGGAATTAAAGG
 AACTAAAACCTAGTATGGCTCTAGGGATTCTGTACAGGAATATTGCCAATGACTAG
 TCCTCATCCATGTAGCACCCTAAATTCTCCATGCCCTGGAAAGAACCTGGGACTTAGTTAG
 GTAGATTAATATCTGGAGCTCCCGAGGGACCAAATCTCAACTTTTTCTCCACTAG
 CACCTGGAATGATGCTTGTATGTGGCAGATAAGTAAATTGGCATGCTTATATATTCTACA
 TCTGTAAGTGTGAGTTTATGGAGAGAGGGCTTTATGCTTAAATTGTACATGGCAA
 TAAATCCCAGAAGGATCTGTAGATGAGGACCTGCTTTCTCTCATTTGTCCACCTT
 ACTAAAAGTCAGTAGAAATCTCTACCTCATAACTCCCTCAAAGGCAGCTCAGAACAGATTAG
 AACCAAGACTTACTAACCAATTCCACCCCCACCAACCCCTCTACTGCCACTTTAAAAAA
 ATTAATAGTTCTATGGAACTGATCTAAGATTAGAAAAATTAAATTCTTAAATTCTACCA
 TGGACTTTATTACATGACTCTAAGACTATAAGAAAATCTGATGGCAGTGACAAAGTGCTA
 GCATTATTGTTATCTAATAAGACCTGGAGCATATGTGCAACTTATGAGTGTATCAGTTG
 TTGCACTGTAATTGCTTGTGTTAAGCCTGGAACCTGTAAGAAAATGAAAATTAAATT
 TTTTCTAGGACGAGCTATGAGAAAAGCTATTGAGAGTATCTAGTTAATCAGTGCAGTAGTTG
 GAAACCTGCTGGTGTATGTGATGTGCTCTGTGCTTTGAATGACTTATCATCTAGTCT
 TGTCTATTTCCTTGATGTTCAAGTCCTAGTCTATAGGATTGGCAGTTAAATGCTTAC
 TCCCCCTTTAAAATGATTAACATGTGCTTGAaaaaaaaaaaaaaaaaaaaaaaa

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FIGURE 38

MRPGLSFLLALLFFLGQAAGDLGDVGPPISPAGFSSFPGVDSFFFSSSRSGSSSRSLGS
GGSQLFSNFTGSVDDRGTCQCSVSLPDTPVDRVERLETAHVLSQKFEKELSKVREYV
QLISVYEKKLLNLTVRIDIMEKDTISYTTELDFELIKVEVKEMEKLVIQLKESFGGSSEIVDQ
LEVEIRNMTLLVEKLETLDKNNVLAIRREIVALKTKLKECEASKDQNTPVVHPPPTPGSCGH
GGVVNISKPSVVQLNWREGFSYLYGAWGRDYSPQHPNKGLYWVAPLNTDGRLLYYRLYNTLD
DLLLYINARELRITYGQGSGTAVYNNMYVNMYNTGNIARVNLTNTIAVTQTLPNAAYNNR
FSYANVAWQDIDFAVDENGLWVIYSTEASTGNMVISKLNDTLQVLNTWYTKQYKPSASNAF
MVCGVLYATRMNTRTEEIFYYYDTNTGKEGKLDIVMHKMQEKVQSINYNPFDQKLYVYNDG
YLLNYDLSVLQKPQ

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FIGURE 39

GCTCTGAAGACCAAGCTGAAAGAGTGTGAGGCCTCTAAAGATCAAACACCCCTGTCGCCAC
CCTCCTCCCACCTCCAGGGAGCTGTGGTCATGGTGGTGTGGTGAACATCAGCAAACCGTCTGT
GGTCAGCTCAACTGGAGAGGGTTTCTTATCTATGGTCTGGGTAGGGATTACTCTC
CCCAGCATCCAAACAAAGGNATGTATTGGGNGGGCCATTGAATAACAGATGGGAGACTGTTG
GAGTATTATAGACTGTACAACCCACTGGATGATTGCTATTGTATATAATGCTCGAGAGTT
GCGGATCACCTATGCCAAGGTAGTGGTACAGCAGTTACAACAAACATGTACGTCAACA
TGTACAACACCGGGNATTGCCAGAGTTAACCTGACC

FIGURE 40

TCTCGCAGATAGTAAATAATCTGGAAAGGCAGAGAAAGCTGTCTCCATCTTGTCTGTAT
 CCGCTGCTCTGTGACGTTGTGGAGATGGGGAGCGCTCTGGGCTGTGCTCCATGGCGAGCT
 GGATACCATGTTGTGGAAGTGCCCGTGTGCTATGCCGATGCTGCTTAGTGGAAAC
 AACTCCACTGTAACTAGATTGATCTATGCACTTTCTTGCTGTGGAGTATGTAGCTG
 TGTAATGTTGATACCAGGAATGAGAAGAACACTGAATAAGATTCTGGATTGTGAGAAATG
 AGAAAAGGTGTGTCCCTGTAACATTGTTGGCTATAAAAGCTGTATATGTTGTGCTT
 GGTTGGCTATGTTCTATCTTCTCTTACTAATGATCAAAGTGAAGAGTAGCAGTGA
 TCCTAGAGCTGCAGTGACAATGGATTGGTTCTTAAATTGCTGCAGCAATTGCAATT
 TTATTGGGCATTCTTCATTCCAGAAGGAACCTTACAACGTGTGGTTATGTAGGCATG
 GCAGGTGCCTTGTGTTCATCCTCATACAACACTAGCTTACTTATTGATTGACATTGATG
 GAATGAATCGTGGGTTGAAAAAAATGAGAAGGGAACTCGAGATGTTGTATGCAGCCTGT
 TATCAGCTACAGCTGTAATTATCTGCTGCTTAGTTGCTATCGTCTGTTCTTGTCTAC
 TACACTCATCAGCCAGTTGTTAGAAAACAAGGCCTCATCAGTGTCAACATGCTCCTCTG
 CGTTGGTGTCTGTATACTGCAAAATCCAAGAATCACACCAAGATCTGGTT
 TGTTACAGTCTTCAGTAATTACAGTCTACACAATGTTGACATGGTCAGCTATGACCAAT
 GAACCAGAAACAAATTGCAACCCAAGTCTACTAACGATAATTGGCTACAATACAACAGCAC
 TGTCCTCAAAGGAAGGGCAGTCAGTCCAGTGGCATGCTCAAGGAATTATAGGACTAATT
 TCTTTGTTGTGTAATTATTCCAGCATCGTACTTCAAACAAATAGTCAGGTTAATAAA
 CTGACTCTAACAAAGTGAATCTACATTAATAGAAGATGGGGAGCTAGAAGTGTGATGGATC
 ACTGGAGGATGGGAGCATGTTACCGAGCTGTAGATAATGAAAGGGATGGGTGTCACCTAC
 GTTATTCTCTTCACTTCATGCTTCTGGCTTCACTTATATCATGATGACCCCTTAC
 AACGGTCCAGGTATGAAACCTCTCGTGAGATGAAAAGTCAGTGGACAGCTGTCTGGGTGAA
 AATCTCTCAGTTGGCATCGTGTATGTTGGACACTCGTGGCACCACTTGTTC
 TTACAAATCGTGATTGACTGAGTGAGACTTCTAGCATGAAAGTCCCACTTGATTATTGC
 TTATTGAAAACAGTATTCCAACTTTGTAAGTTGTTGATGTTTGCTTCCATGTAAC
 TTCTCCAGTGTCTGGCATGAATTAGATTACTGCTTGTCACTTGTGTTATTCTTACCAA
 GTGCATTGATATGTGAAGTAGAATTGAGAGGAAAGTTTATGAAATATGGTGTGAGT
 TAGAAAAGTGGCCATTATTGGGCTATTCTCTGCTCTAGTTGTTGAAATGAAGAGTAAA
 ACAAAATTGTTGACTATTAAAATTATATTAGACCTTAAGCTGTTAGCAAGCATTAAA
 GCAAATGTATGGCTGCCTTGGAAATATTGATGTGTTGCCTGGCAGGACTGTGAAAGAAC
 ATGGTTTATTAAAATTATAAAACAAGTCACTTAAATGCCAGTTGCTGAAAATCTTATA
 AGGTTTACCTTGATACGGAAATTACACAGGTAGGGAGTGTGTTAGTGGACAATAGTGTAGGTT
 TGGATGGAGGTGCGTACTAAATTGAATAACGAGTAATAATCTTACTTGGGTAGAGATGG
 CCTTGCAACAAAGTGAACTGTTGGTTGTTAAACTCATGAAAGTATGGGTGAGTGG
 AATGTTGGAACTCTGAAGGATTAGACAAGGTTTGAAAAGGATAATCATGGGTAGAAGG
 AAGTGTGTTGAAAGTCACTTGGAAAGTTAGTTGGGCCAGCACGGTAGCTCACCTGGT
 AATCCCAGCACTTGGGAGCTTAAGTGGTAGATTACTTGAGGCCAGGAATTGAGCAGCT
 TGGCACATGGTGAACCTGTTCTATAAAATAATCTGCTTGGTAGCATATGCCCTGGTCCAG
 CACTGAGAGGCTAGTGAAGATTGCTGAGGCCAGAGCCAAGGGTTGAGCTGAGCAAGTCACGT
 CACTGCACTCTAGCTGGCACAGAGTAAGCCAAAAAAATATATATATTGAAATCAAGGAGG
 CAAAATTGACAGGGAAAGGAAGTAACTGCAAAACCACTAGGCTTGTAGGACTTATATA
 AAATCTAGTCCAGTTCTCTCATTTAAAGGAAATGAAGACACTGAAATACAGACTAAATAGCT
 CAGATAGCTAATTAGGAAATTCAAGTTGGCCAATAATAGCATTCTCTGACATTAAAAA
 TAATTCTATTCAAAATACATGCAATTGATTACACCTCATACTGTGATAATTATGTGAT
 GTGGATTGCTGGTGTCCAGCATGCCATAAACAGGTAGAAGAATGATGGAATGTTTAGA
 ATAAACTCTGCTTATAGTATACACAGTTCAAAAGATGTTAAATGCTTGTATTAA
 CTGCCATGTAATTGAAATATATAGATTGTAACCTTCAACCTGAAAATCAAGCAGTATG
 AGAGTTAGTTATTGATGTGTCAGTAGTGTCTAATGAAAGCTTAAATCTACAATTCT
 TCTTAAAGGAAATTATTAATGTGAATGGAATATAACAATTGCTTAATTCCCCAACCTTA
 TTCTGTGTAGACATTGTATTCCACAAATTGAAATGGCTGTGTTACCTCTAAATAATG
 AATTCAAGAGAAAAAAAAAAAAAA

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FIGURE 41

MGSVLGLCSMASWIPCLCGSAPCLLCRCCPSGNNSTVTRLIYALFLLVGVCVACVMLIPGME
EQLNKIPGFCENEKGVVPCNILVGYKAVYRLCFGAMFYLLSLLMIKVKSSEDPRAAVHNG
FWFFFKAQAAIAIIIGAFFIPEGFTTVWFYVGMAGAFCFILIQLVLLIDFAHSWNESWVEKM
EEGNSRCWYAALLSATALNYLLSLVAIVLFFVYYTHPASCESENKAFISVNMLLCVGASVMSI
LPKIQESQPRSGLLQSSVITVYTMYLTSAMTNEPETNCNPSSLSSIIGYNTTSTVPKEGQSV
QWWHAQGIIGLILFLLCVFYSSIRTSNNSQVNKLTLTSDESTLIEDGGARSDGSLEDGDDVH
RAVDNERDGVTVYSYSFFHFMLFLASLYIMMTLTNWSRYEPSREMKSQWTAVWVKISSSWIGI
VLYVWTLVAPLVLTNRDFD

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FIGURE 42

GCGAGAAAGAAGCTGTCTCCATCTTGTCTGTATCCCGCTGCTTCTTGNACGTTGTGGAGAT
GGGGAGCGTC CCTGGGCTGTGCTCCATGGCAGCTGGATACCATGTTGTGTGGAAGTGC
CCGTGTTGCTATGCCGATGCTGTCCTAGTGGAAACAANTCCACTGTAACTAGATTGATCTA
TGCAC TTTCTTGCTTGGAGTATGTGTAGCTTGTGTAATGTTGATACCAGGAATGGAAG
AACAACTGAATAAGATT CCTGGATTTGTGAGAATGAGAAAGGTGTTGTCCCTGTAACATT
TTGGTTGGCTATAAGCTGTATATCGTTGTGCTTGGTTGGCTATGTTCTATCTTCTTCT
CTCTTACTAATGATCAAAGTGAAGAGTAGCAGTGATCCTAGAGCTGCAGTCACAATGGAT
TTTGGTTCTTAAATTGCTGCAGCAATTGCAATTATTATTGGGGC

FIGURE 43

GTTATTGTGAACCTTGTGGAGATGGGAGGTCNTGGGCTGTGTTCCATGGCGAGCTGGATAAC
CANGTTGTGGAAGTGCCCCGTGTTGNTATGCCGATGCTGCCTAGTGGAAACAANTCC
ACTGTAATTAGATTGATNTATGCACTTTNTTGCTTGGAGTANGTAGCTTGTGTAAT
GTTGATACCAGGAATGGAAGAACAACTGAATAAGATTCTGGATTTGTGAGAATGAGAAAG
GTGTTGTCCCTTGTAAACATTTGGTTGGCTATAAAGCTGTATATNGTTGTGCTTGGTTG
GCTANGTTCTATNTTCTCTCTTACTAATGATCAAAGTGAAGAGTAGCAGTGATCCTAG
AGCTGCAGTGCACAATGGATTTGGTTAAATTGCTGCAGCAATTGCAATTATTATTG
GGC

FIGURE 44

AAGAAGCTGTCTCCATCTTGTCTGTATCCGCTGCTCTTGTGAACGTTNTGGAGATGGGGAGC
GTCCTTGGGGTTGTGCTCCATGGCGAGCTGGATACCATGTTGTGGAAGTGCCCCGTGTT
TGCTATGCCGATGCTGTCTAGTGGAAACAACACTCCACTGTAACTAGATTGATCTATGCACCT
TTCTTGCTTGGAGTATGTAGCTTGTGTAATGTTGATACCAGGAATGGAAGAACAACT
GAATAAGATTCCCTGGATTTGTGAGAATGAGAAAGGTGTTGCCCTGTAACATTGGTTG
GCTATAAAGCTGTATATCGTTGTGCTTGGTTGGCTATGTTCTATCTTCTCTCTTTA
CTAATGATCAAAGTGAAGAGTAGCAGTGATCCTAGAGCTGCAGTCACAATGGATTTGGTT
CTTTAAATTGCTGCAGCAATTGCAATTATTATTGGGGC

FIGURE 45

GCTGTCCTAGTGGAAACAANTCCAAC TTGTAAC TTGGATTGATCTATGCAC TTTTCCCTG
CTTGGTAGTGTAGCTTGTAAATGTTGCCAGGATTGGANGAACAACTGAATA
AGATTCCCTGGATTTGTGAGAATGAGAAAGGTGTTGCCCCTGTAACATTGGTTGGC
TATAAAGCTGTATATCGTTGTGCTTGCTTGGCTATGTTCTATCTTCTCTCTTACT
AATGATCAAAGTGAAGAGTAGCAGTGATCCTAGAGCTGCAGTCACAATGGATTTGGTTCT
TTAAATTGCTGCAGCAATTGCAATTATTATTGGGGCATTCTCATCCAGAAGGAAC TTT
ACAAC TGTGGTTTATGTAGGCATGGCAGGTGCCTTGTTCATCCTCATACAAC TAGT
CTTACTTATTGATTTGCACATTGAAATGAATCGTGGTTGAAAAAATGGAAGAAGGGA
ACTCGAGATGTTGGTATGCAGCCTGTTATCAGCTACAGCTCTGAATTATCTGCTGTCTTA
GTTGCTATCGCCTGTTCTTGTCTACTACACTCATCCAGCCAGTTGTTCAGAAAACAAGGC
GTTCATCAGTGTCAACATGCTCCTCTGC GTTGGT GCTCTGTAATG

FIGURE 46A

CTCGGCGCGCACAGGCAGCTCGTTGCCCTGCGATTGAGCTGCGGGTCGCGGCCGGCGCC
 GGCCTCTCCAATGGCAAATGTGTGCTGGAGGCGAGCGAGGCTTCGGCAAAGGCACT
 CGAGTGTGAGACCGGGCGAGTCCTGTGAAAGCAGATAAAAGAAAACATTATTAAACGT
 GTCATTACGAGGGAGCGCCCGGGCTGTCGACTCCCCGCGAACATTGGCTCCCT
 CCAGCTCCGAGAGAGGAGAAGAAGAAGCGAAAAGAGGCAGATTACGTCGTTCCAGCCA
 AGTGGACCTGATCGATGCCCTCCTGAATTATCACGATATTGATTATTAGCGATGCC
 CTGGTTGTGTTACGCACACACAGTGCACACAAGGCTGGCTCGCTCCCTCCCTCGT
 TTCCAGCTCCTGGCGAATCCCACATCTGTTCAACTCTCCGGAGGGCGAGCAGGAGCGA
 GAGTGTGTCGAATCTGAGTGAAGAGGGACGAGGGAAAAGAAAACAAAGCCACAGACGAA
 TTGAGACTCCGCATCCAAAAGAACGACCATCAGAAAAAAAGAACAGATATGGGCCCCCGA
 GCCTCGTGTGCTGCTGTGCAACTGTGTTCCCTGCTGGTGGAGCTCGGCCTTC
 CTGTCGACCACCGCCTGAAAGGCAGGTTACAGAGGACCGCAGGAACATCGGCCCAACAT
 CATCCTGGTGTGACGGACGACAGGATGTGGAGCTGGTCCATGCAGGTGATGAACAAGA
 CCCGGCGCATCATGGAGCAGGGCGGGCGACTTCATCAACGCCCTCGTGACCACACCATG
 TGCTGCCCTACGCTCCTCCATCCTCACTGGCAAGTACGTCACAACCACAACACCTACAC
 CAACAATGAGAACTGCTCCTGCCCTGGCAGGCACAGCACGAGAGCCGACCTTGCCG
 TGTACCTCAATAGCACTGGTACCGGACAGCTTCTGGAAAGTATCTTAATGAATAAAC
 GGCTCCTACGTGCCACCGGCTGGAAGGAGTGGTGGACTCCTTAAAAACTCCGCTTTA
 TAACACACGCTGTGCGAACGGGTGAAAGAGAACGACGGCTCCGACTACTCAAGGATT
 ACCTCACAGACCTCATACCAATGACAGCGTGAGCTTCCGACGTCCAAGAAGATGTAC
 CCGCACAGGCCAGTCCTCATGGTCATCAGCCATGCAGCCCCCACGGCCCTGAGGATTAGC
 CCCACAATATTACGCTCTTCCAAACGCATCTCAGCACATCACGCCAGCTACAACACTACG
 CGCCCAACCCGGACAAACACTGGATCATGCGTACACGGGGCCATGAAGCCATCCACATG
 GAATTACCAACATGCTCCAGCGGAAGCGCTTGCAAGACCTCATGTCGGTGGACGACTCCAT
 GGAGACGATTACAACATGCTGTTGAGACGGCGAGCTGGACAACACGTACATGTATA
 CCGCCGACCACGGTTACCACATCGGCCAGTTGGCCTGGTGAAGGGAAATCCATGCCATAT
 GAGTTGACATCAGGGTCCCCTACGTGAGGGGCCAACGTGGAAGCCGGTGTCTGAA
 TCCCCACATCGTCCCTAACATTGACCTGCCACCATCTGGACATTGCAGGCCCTGGACA
 TACCTCGGGATATGGACGGAAATCCATCCTCAAGCTGCTGGACACGGAGCCGGTGTGGAA
 CGGTTCACTGAAAAAGAGATGAGGGTCTGGCGGGACTCCTCTGGTGGAGAGAGGCAA
 GCTGCTACACAAGAGAGACAATGACAAGGTGGACGCCAGGAGGAACCTGCCCCAAGT
 ACCAGCGTGTGAAGGACCTGTGTCAGCGTGCTGAGTACCAAGACGGCGTGTGAGCAGCTGGG
 CAGAAGTGGCAGTGTGAGGACGCCAGGGAAAGCTGAAGCTGCATAAGTGCACAGGGCCC
 CATCGGCTGGCGGCAGCAGGCCCTCTCAACCTCGTGCCAAGTACTACGGCAGGGCA
 GCGAGGCCCTGCACCTGTGACAGCGGGACTACAAGCTCAGCCTGGCGGACGCCGGAAAAAA
 CTCTCAAGAAGAAGTACAAGGCCAGCTATGTCCCGAGTCGCTCCATCCGCTCAGTGGCCAT
 CGAGGTGGACGGCAGGGTGTACACGTAGGCCTGGTGTGCCAGGCCAGCCCCAAACCTCA
 CCAAGCGGCACTGGCAGGGCCCTGAGGACCAAGATGACAAGGATGGTGGGGACTTCAGT
 GGCACGGAGGCCCTCCGACTACTCAGGCCCAACCCATTAAAGTGACACATCGGTGCTA
 CATCCTAGAGAACGACACAGTCCAGTGTGACCTGACCTGTACAAGTCCCTGCAGGCCCTGG
 AAGACCACAAGCTGCACATCGACCGAGATTGAAACCCCTGCAGAACAAAATTAGAACCTG
 AGGAAAGTCCGAGGTACCTGAAGAAAAAGGGCAGAACGAGATGTGACTGTACAAATCAG
 CTACCACACCCAGCACAAGGCCCTCAAGCACAGAGGCTCCAGTCTGCATCCTTCAGGA
 AGGGCCTGCAAGAGAAGGACAAGGTGTGGCTGGCTGGAGCAGAACGCAAGAACACTC
 CGCAAGCTGCTCAAGGCCCTGCAGAACACGACACGTGCAGCATGCCAGGCCCTACGTGCT
 CACCCACGACAACCAGCACTGGCAGACGGCGCTTCTGGACACTGGGGCTTCTGTGCCT
 GCACCGCGCCAACAATAACACGTACTGGTGCATGAGGACCATCAATGAGACTCACAATTG

FIGURE 46B

CTCTTCTGTGAATTGCAACTGGCTTCAGAGTACTTGATCTAACACAGACCCCTACCA
GCTGATGAATGCAGTGAACACACTGGACAGGGATGTCCTAACCGAGCTACACGTACAGCTCA
TGGAGCTGAGGAGCTGCAAGGGTTACAAGCAGTGTAACCCCGGACTCGAAACATGGACCTG
GATGGAGGAAGCTATGAGCAATACAGGCAGTTCAAGCGTCAAAGTGGCCAGAAATGAAGAG
ACCTTCTTCAAATCACTGGGACAACGTGGGAAGGCTGGGAAGGTTAAGAAACAACAGAGG
TGGACCTCAAAAACATAGAGGCATCACCTGACTGCACAGGAATGAAAAACCATGTGGGTG
ATTTCCAGCAGACCTGTGCTATTGCCAGGAGGCTGAGAAAGCAAGCACGCACTCTCAGTC
AACATGACAGATTCTGGAGGATAACCAGCAGGAGCAGAGATAACTCAGGAAGTCCATT
GCCCTGCTTTGCTTGATTATAACCTACCAGCTGCACAAAATGCATTTTCGTATCAA
AAAGTCACCACTAACCCCTCCCCAGAAGCTCACAAAGGAAACGGAGAGCGAGCGAGAGA
GATTCCTTGGAAATTCTCCAAGGGCGAAAGTCATTGGAATTTAAATCATAGGGAAA
AGCAGTCCTGTTCTAAATCCTTTGTTGTACAAAGAAGGAACTAAGAAGCA
GGACAGAGGCAACGTGGAGAGGGCTGAAAACAGTCAGAGACGTTGACAATGAGTCAGTAGC
ACAAAAGAGATGACATTACCTAGCACTATAAACCCCTGGTGCCTCTGAAGAAACTGCCTTC
ATTGTATATATGTGACTATTACATGTAATCAACATGGAACCTTTAGGGAACCTAATAAG
AAATCCAATTTCAGGAGTGGTGGTGTCAATAACGCTCTGGCCAGTGTAAAAGAAAAA

FIGURE 47

MGPPSLVLCLLSATVFSLLGGSSAFLSHRLKGRFQRDRRNIRPNIILVLTDDQDVELGSMQ
VMNKTRRIMEQGGAHFINAFTPMCCPSRSSILTGYVHNHNTYTNENNENSSPSWQAQHES
RTFAVYLNSTGYRTAFFGKYLNEYNGSYVPPGWKEVGLLKNSRFYNYTLCRNGVKEKGSD
YSKDYLTDLITNDSVSFFRTSKKMYPHRPVLMVISHAAPHGPEDSAPQYSRLFPNASQHITP
SYNYAPNPDKHWIMRYTGPMPKIHMЕFTNMLQRKRLQTLMSVDDSMETIYNMLVETGELDNT
YIVYTADHGHIQFGLVKGSMPYEFDIRVPFYVRGPNEAGCLNPHIVLNIDLAPTIIDI
AGLDIPADMKGKSILKLLDTERPVNRFHLLKKMRWRDSFLVERGKLHCKGPMRLGGSRALSNLVPKY
FLPKYQRVKDLCQRAEYQTACEQLGQKWQCVEDATGKLKLHKCKGPMRLGGSRALSNLVPKY
YGQGSEACTCDSGDYKLSLAGRRKKLFKKKYKASYVRSRSIRSVAIEVDGRVYHVGLGAAQ
PRNLTKRHWPAGEDQDDKGDFSGTGGLPDYSAANPIKVTHRCYILENDTVQCDLDLYKS
LQAWKDHKLHIDHEIETLQNKIKNLREVRGHLKKRPEECDCHKISYHTQHKGRLKHRGSSL
HPFRKGLQEKDVKWLREQRKKKLRKLLKRLQNNDTCSMPGLTCFTHDNQHWQTAPFWTLG
PFCACTSANNNTYWCMRTINETHNFLCEFATGFLEYFDLNTDPYQLMNAVNTLDRDVLNQL
HVQLMELRSCKGYKQCNPRTRNMDLDGGSYEQYRQFQRRKWPENKRPSKSLGQLWEGWEG

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FIGURE 48

AACAAAGTTCACTGACTGAGAGGGCTGAGCGGAGGCTGCTGAAGGGAGAAAGGAGTGAGGA
GCTGCTGGCAGAGAGGGACTGTCCGGCTCCAGATGCTGGCCTCCTGGGAGCACAGCCC
TCGTGGATGGATCACAGGTGCTGCTGTGGCGGTCCCTGCTGCTGCTGCTGCTGGCCACC
TGCCTTTCCACGGACGGCAGGACTGTGACGTGGAGAGGAACCGTACAGCTGCAGGGGAAA
CCGAGTCCGCCGGGCCAGCCTGGCCCTCCGGCGGCGGGCACCTGGAAATCTTCACC
ATCACCGTCATCCTGGCCACGTATCTCATGTGCCAATGTGGCCTCCACCACCACAC
CCCCGCCACACCCCTCACCACCTCCACCACCACCCCCACCGCCACCATCCCCGCCA
CGCTCGCTGAGGCTGCTGTCGCCGGTGCCTGTGGACAGCAGCTGCCCTGCCCTCCATCTG
TTCCCAGGACAAGTGGACCCATGTTCCATGTGGAAGGATGCATCTCTGGGTGAACGAGG
GGAACAATAGACTGGGCTTGCTCCAGCTGCATTGCATGGCATGCCCAAGTGTACTATGGC
AGCAGAGAATGGAGGAACACTGGGTCTGCAGTGCTGAAGGGTTGGGAGTGGAGAGCAAGG
GTGCTTTGGGGCTGGACAGCCGTCTGTGACAGTGAATCCCAGTGAGCCCCAGAAATG
ACAAGCGTGTCTGGCAGAGCCAGCACACAAGTGGATGTGAAGTGCCGTCTGACCTCCTC
ATCAGGCTGCTGCAGGCCTCTGGCGGGCAGGCAGGGACTGGAGAGGCCCTGAGAATGCTTT
GGTTGGAGAAGGCAGTGTGAGGCTGCACAGTCAATTGCGCTTAGTCCAAGAAAAT
AAAAACCACTAAGAAGCTTAAAAAAAAAAAAAAA

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FIGURE 49

MLGLLGSTALVGWITGAAVAVLLLLLLATCLFHGRQDCDVERNRTAAGGNVRRAQPWPFR
RRGHLGIFHHHRHPGHVSHPNVGLHHHHPRHTPHLHHHHHPRHHPRHAR

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FIGURE 50

GGCGGCTGCTGAGCTGCCTTGAGGTGCAGTGTGGGATCCAGAGCCATGTCGGACCTGCTA
CTACTGGGCCTGATTGGGGCCTGACTCTTACTGCTGCTGACGCTGCTGGCCTTGCCGG
GTACTCAGGGCTACTGGCTGGGTGGAAGTGAGTGCTGGTCACCCCCCATCCGAAACGTCA
CTGTGGCCTACAAGTCCACATGGGCTCTATGGTGAGACTGGGGCTTTCACTGAGAGC
TGCAGCATCTCTCCAAAGCTCCGCTCCATCGCTGTCTACTATGACAACCCCCACATGGTGCC
CCCTGATAAGTGCCGATGTGCCGTGGGCAGCATCCTGAGTGAAAGGTGAGGAATGCCCTCCC
CTGAGCTCATCGACCTCTACCAGAAATTGGCTCAAGGTGTTCTCCTCCGGCACCCAGC
CATGTGGTGACAGCCACCTTCCCTACACCACCTCTGTCCATCTGGCTGGCTACCGCCG
TGTCCATCCTGCCTGGACACCTACATCAAGGAGCGGAAGCTGTGTGCCTATCCTCGGCTGG
AGATCTACCAGGAAGACCAAGATCCATTTCATGTGCCACTGGCACGGCAGGGAGACTTCTAT
GTGCCTGAGATGAAGGAGACAGAGTGGAAATGGGGGGCTTGTGGAGGCCATTGACACCCA
GGTGGATGGCACAGGAGCTGACACAATGAGTGACACGAGTTCTGTAAGCTTGGAAAGTGAGCC
CTGGCAGCCGGAGACTTCAGCTGCCACACTGTCACCTGGGCGAGCAGCCGTGGCTGGGAT
GACGGTGACACCCCGCAGCGAGCACAGCTACAGCGAGTCAGGTGCCAGCGGCTCCTTTGA
GGAGCTGGACTTGGAGGGCGAGGGGCGCTTAGGGAGTCACGGCTGGACCCCTGGACTGAGC
CCCTGGGACTACCAAGTGGCTGGAGCCACTGCCCTGAGAAGGGCAAGGAGTAACCC
ATGGCCTGCACCCCTCTGCAGTGCAGTTGCTGAGGAACGTGAGCAGACTCTCCAGCAGACTCT
CCAGCCCTTCCCTCTGGGGAGGAGGGGTTCTGAGGGACCTGACTTCCCTG
TCCAGGCCTTGTCAAGCCTCTCCTCACTGCCCTTAGGCTCCAGGGCCAGAGGAGCCA
GGGACTATTTCTGCACCAGCCCCCAGGGCTGCCGCCCCCTGTTGTCTTTTCAGACTC
ACAGTGGAGCTCCAGGACCCAGAATAAGCCAATGATTTACTTGTTCACCTGGAAAAAAA
AAAAAAAAAA

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FIGURE 51

MSDLLLGLIGGLLLLLLTLAFAAGYSGLLAGVEVSAGSPPIRNVTVAYKFMGLYGETGR
LFTECSISPRLRSIAVYYDNPHMVPDKRCAVGSILSEGEESPSPELIDLYQKFGFKVFS
FPAPSHVVTATFPYTTILSIWLATRRVHPALDTYIKERKLCAYPRLEIYQEDQIHFMCPALAR
QGDFYVPEMKETEWKWRGLVEAITQVDGTGADTMSDTSSVSLEVSPGSRETSAAATLSPGAS
SRGWDDGDTRSEHSYSESAGSSFEELDLEGEGPLGESRLDPGTEPLGTTKWLWEPTAPEKGKE

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FIGURE 52

CCGCAGGAACGCTGTCTGGCTGCCGCCACCGAACAGCCTGTCTGGTCCCCGGCTCCCT
GCCCGCGCCAGTCATGACCCTGCGCCCTCACTCCTCCGCTCCATCTGCTGCTGCT
GCTGCTCAGTGCAGGGTGTGCCGGCTGAGGCTGGCTCGAAACCGAAAGTCCCCTCCGGA
CCCTCCAAGTGGAGACCCCTGGTGGAGCCCCAGAACCATGTGCCGAGCCGCTGCTTTGGA
GACACGCTTCACATACACTACACGGGAAGCTTGGTAGATGGACGTATTATTGACACCTCCCT
GACCAGAGACCCCTCTGGTTATAGAACTTGCCAAAAGCAGGTGATTCCAGGTCTGGAGCAGA
GTCTTCTCGACATGTGTGGAGAGAACGCAAGGGCAATCATTCCCTCTCACCTGGCTAT
GGAAAACGGGGATTCCACCATCTGTCCAGCGGATGCAGTGGTGCAGTATGACGTGGAGCT
GATTGCACTAATCCGAGCCAACTAAGCTGGCTAAAGCTGGTAAGGGCATTTCCTCTGGTAG
GGATGGCCATGGTGCCAGCCCTCTGGCCTCATTGGGTATCACCTATACAGAAAGGCCAAT
AGACCCAAAGTCTCCAAAAAGAAGCTCAAGGAAGAGAAACGAAACAAGAGCAAAAGAAATA
ATAAAATAATAATTAAAAACTTAAAAAAAAAAAAAA

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FIGURE 53

MTLRPSLLPLHLLLLLSSAVCRAEAGLETESPVRTLQVETLVEPPEPCAEPAAFGDTLHI
HYTGSLVDGRIIDTSLTRDPLVIELGQKQVIPGLEQSLLDMCVGEKRRAIIPSHLAYGKRGF
PPSVPADAVVQYDVELIALIRANYWLKLKVKGILPLVGMAMVPALLGLIGYHLYRKANRPKVS
KKKLKEEKRNKSKKK

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FIGURE 54

CCCGGGAACGTGTTCTGGCTGCCGCACCGAACAGCCTGTCCTGGTGCCCCGGCTCCCTGC
CCCGCGCCCAGTCATGACCCTGCGCCCCCTCACTCCTCCGCTCCATCTGCTGCTGCTGCTGC
TGCTCAGTGC GGCGGTGTGCCGGCTGAGGCTGGCTCGAAACCGAAAGTCCCGTCCGGACC
CTCCAAGTGGAGACCCCTGGTGGAGCCCCCAGAACCATGTGCCGAGCCGCTGCTTTGGAGA
CACGCTTCACATACACTACACGGGAAGCTTGGTAGATGGACGTATTATTGACACCTCCCTGA
CCAGAGACCCCTCTGGTTATAGAACTTGGCCAAAAGCAGGTGATTCCAGGTCTGGAGCAGAGT
CTTCTCGACATGTGTGGAGAGAAGCGAAGGGCAATCATTCTCTCACTTGGCCTATGG
AAAACGGGGATTCCACCATCTGTCCCAGCGGATGCAGTGGTGCAGTATGACGTGGAGCTGA
TTGCACTAATCCGAGCCA ACTACTGGCTAAAGCTGGTAAGGGCATTTCGCCTCTGGTAGGG
ATGGCCATGGTGC CACCCCTCTGGCCTCATTGGGTATCACCTATA CAGAAAGGCCAATAGA
CCCAAAGTCTCCAAAAGAAGCTCAAGGAAGAGAACGAAACAAGAGCAAAAGAAATAATA
AATAATAAATTTAAAAACTTA

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FIGURE 55

CCGAAAGTCCCGTCCGGACCCTCCAAGTGGAGACCCCTGGTGGAGCCCCCAGAACCATGTGCC
GAGCCCGCTGCTTTGGAGACACGCTTCACATACACTACACGGGAAGCTTGGTAGATGGACG
TATTATTGACACCTCCCTGACCAGAGACCCCTGGTTATAGAACTTGGCCAAAAGCAGGTGA
TTCCAGGTCTGGAGCAGAGTCTCTCGACATGTGTGGAGAGAAGCGAAGGGCAATCATT
CCTTCTCACTTGGCCTATGGAAAACGGGGATTCACCACATGTCCCAGCGGATGCAGTGGT
GCAGTATGACGTGGAGCTGATTGCACTAACCGAGCCAACTAAGCTGGCTAAAGCTGGTGAAGG
GCATTTGCCTCTGGTAGGGATGCCATGGTGCCAGCCCTCCTGGCCTCATTGGGTATCAC
CTATACAGAAAGGCCAATAGACCCAAAGTCTCCAAAAGAAGCTCAAGGAAGAGAAACGAAA
CAAGAGCAAAAGAAATAATAATAATAATTTAAAAACTTAAAA

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FIGURE 56

CTGCTGCATCCGGGTCTGGAGGCTGTGGCGTTGTTCTTGCTAAATCGGGGAG
TGAGGCGGGCGCGCGCGACACCGGGCTCCGAACCACTGCACGACGGGCTGGACTG
ACCTGAAAAAAATGTCTGGATTCTAGAGGGCTTGAGATGCTCAGAATGCATTGACTGGGG
GAAAAGCGCAATACTATTGCTTCCATTGCTGCTGGTGTACTATTTTACAGGCTGGTGGAT
TATCATAGATGCAGCTGTTATTATCCCACCATGAAAGATTCAACCACTCATACCATGCCT
GTGGTGTATAGCAACCATAAGCCTCCTAATGATTAATGCAGTATCGAATGGACAAGTCCGA
GGTGATAGTTACAGTGAAGGTTCTGGGTCAAACAGGTGCTCGCATTGGCTTCTGTTGG
TTTCATGTTGGCCTTGGATCTTGATCTGATTGCATCTATGTGGATTCTTTGGAGGTTATGTTG
CTAAAGAAAAAGACATAGTATAACCTGAAATTGCTGTATTTTCCAGAATGCCCTCATCTT
TTTGGAGGGCTGGTTTAAGTTGGCCGACTGAAGACTTATGGCAGTGAACACATCTGAT
TTCCCACAGCACAAACAGCCCTGCATGGGTTGTTGTTTACTGCTCACTCCAACCTT
TTGTAATGCCATTTCTAAACTTATTCAGTGAGTAGTCTCAGCTAAAGTTGTGAATACT
AAAATCACGAGAACACCTAAACAAACAACCAAAATCTATTGTGGTATGCACTGATTAACTT
ATAAAATGTTAGAGGAAACTTCACATGAATAATTGTCAAATTATCATGGTATAATT
TGTAAAAATAAAAGAAATTACAAAAGAAATTATGGATTGTCATGTAAGTATTGTCATA
TCTGAGGTCCAAAACCACAATGAAAGTGCCTGAAAGATTAAATGTGTTATTCAAATGTGGT
CTCTCTGTGTCAAATGTTAAATGAAATATAACATTAGTTACCAAAATTCTGTGAACATGTAAT
GTAACGGCTTTGAGGGTCTCCAAGGGTGAGTGGACGTGTTGGAAGAGAGAACCAT
GGTCCAGCCACCAGGCTCCCTGTGTCCTCCATGGAAAGGTCTCCGCTGTGCCTCTCATT
CCAAGGGCAGGAAGATGTGACTCAGCCATGACACGTGGTTCTGGTGGGATGCACAGTCAC
CACATCCACCACTG

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FIGURE 57

MSGFLEGLRCSECIDWGEKRNTIASIAAGVLFFTGWIIIDAAVIYPTMKDFNHSYHACVI
ATIAFLMINAVSNGQVRGDSYSEGCLGQTGARIWLFVGMLAFGSLIASMWILFGGYVAKEK
DIVYPGIAVFFQNAFIFFGGLVFKFGRTEDLWQ

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FIGURE 58

TTCTTGCTAAAATCGGGGAGTGAGGC GGCGCGCGACACCGGGCTCGGAACC
ACTGCACGACGGGCTGGACTGACCTGAAAAAAATGTCTGGATTCTAGAGGGCTTGAGATG
CTCAGAATGCATTGACTGGGGAAAAGCGCAATACTATTGCTTCCATTGCTGCTGGTGTAC
TATTTTACAGGCTGGATTATCATAGATGCAGCTGTTATTATCCCACCATGAAAGAT
TTCAACCACTCATACCATGCCTGTGGTTATAGCAACCATAGCCTCCTAATGATTAATGC
AGTATCGAATGGACAAGTCCGAGGTGATAGTTACAGTGAAGGTTGTCTGGTCAAACAGGTG
CTCGCATTGGCTTTCGTTGGTTCATGTTGGCCTTGGATCTGATTGCATCTATGTGG
ATTCTTTGGAGGTTATGTTCTAAAGAAAAAGACATAGTATAACCTGGAATTGCTGTATT
TTTCCAGAATGCCTTCATCTTTGGAGGGCTGGTTTAAGTTGGC

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FIGURE 59

TGGACGGACCTGAAAAAAATGTTGGATTNTAGAGGGNTTGAGATGTTCAGAATGCATGAC
TGGGGAAAAGCGCAAATACTATTGCTTCATTGCTGCTGGTGTANTATTTTACAGGCTG
GTGGATTATCATAGATGCAGNTGTTATTATCCCACCATGAAAGATTCAACCANTCATACC
ATGCCTGTGGTGTATAGCAACCATAGCCTCNTAATGATTAATGCAGTATCGAATGGACAA
GTCCGAGGTGATAGTTACAGTGAAGGTTGGTCAAACAGGTGCTCGCATTGGCTTT
CGTTGGTTCATGTTGCCCTTGGATCTTGATCTATGTGGATTCTTTGGAGGTT
ATGTTGCTAAAGAAAAAGACATAGTATAACCCTGGAATTGNTGTATTTTCCAGAATGCCTTC
ATCTTTTGAGGGCTGGTTTAAGTTGCCGCACTGAAGANTTATGGCAGTG

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FIGURE 60

GGACACCGGGTTCCGGACCAATGCANGACGGGTGGANTGACCTGAAAAAAATGTTGGATT
TTTAGAGGGCTTGAGATGNTCAGAATGCATTGACTGGGGAAAAGCGCAATANTATTGCTTT
CCATTGCTGCTGGTGTACTATTTTACAGGGTGGATTATCATAGATGCAGCTGTTATT
TATCCCACCATGAAAGATTNAACCACTCATACCATGCCTGTGGTGTATAGCAACCATAGC
CTTCCTAATGATTAATGCAGTATCGAATGGACAAGTCCGAGGTGATAGTTACAGTGAAGGTT
GTTGGGTCAAACAGGTGNTCGCATTGGCTTTCGTTGGTTCATGTTGGCCTTGGATT
CTGATTGNATTCTATGCGGATTCTTCTGGAGGTTATGTTGCTAAAGAAAAAGACATAGTAT
ACCTGGAATTNCTNTATTTCCAGAATGCC

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FIGURE 61

TAGAGGGCTTGAGATGCTCAGAATGCATTGACTGGGGGAAAAGCGCAATANTATTGCTTCC
ATTGNTGNTGGTGTANTATTTTACAGGCTGGTGGATTATNATAGATGCAGCTGTTATTT
ATCCCACCATGAAAGATTNAACCANTCATACCATGCCTGTGGTGTATAGCAACCATAGCC
TTCCTTAATGATTAATGCAGTATNGAATGGACAAGTCCGAGGTGATAGTTACAGTGAAGGTTG
TTTGGGTCAAACAGGTGNTNGCATTGGCTTNGTGGTTCATGTTGGCCTTGGATCTN
TGATTGCATTATGTGGATTNTTTGGAGGTTATGTTGCTAAAGNAAAAGACATAGTATAAC
CCTGT

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FIGURE 62

GGGAGGCTGTGNCCGTTTGTGCTAAATCGGGGAGTGAGGCGCCGGCGCG
CGNGACACCGGGTCCGGAACCATTCGACGACGGGTGGACTGACCTGAAAAAAATGTTG
GATTNTAGAGGGCTTGAGATGCTCAGAATGCATTGACTGGGGAAAAGCGCAATACTATT
GCTTCATTGCTGCTGGTGTACTATTTTACAGGCTGGTGGATTATCATAGATGCAGCTGT
TATTATCCCACCATGAAAGATTCAACCACTCATACCATGCCTGTGGTGTATAGCAACCA
TAGCCTTCCTAATGATTAATGCAGTATCGAATGGACAAGTCCGAGGTGATAGTTACAGTGAA
GGTTGTCTGGGTCAAACAGGTGCTCGCATTGGCTTTCGTTGGTTCATGTTGGCCTTGG
ATNTCTGATTGCATCTATGTGGATTCTTTGGAGGTTATGTTGCTAAAGAAAAAGACATAG
TATACCCCTGGAATTGCTGTATTTCCAGAATGCCTTCATNTTTTGGAGGGCTG

FIGURE 63

CGACGCCGGCGT**ATGTGGCTTCCGCTGGTGTGCTCCTGGCTGTGCTGCTGGCCGTCC**
 TCTGCAAAGTTACTTGGGACTATTCTCTGGCAGCTCCCCGAATCCTTCTCCGAAGATGTC
 AAACGGCCCCAGCGCCCTGGTAACTGACAAGGAGGCCAGGAAGAAGGGTCTCAAACAAGC
 TTTTCAGCCAACCAAGTGC GGAGAAGCTGGATGTGGTGGTAATTGGCAGTGCTGCTGGGG
 GCCTGGCTGCAGCTGCAATTCTAGCTAAAGCTGGCAAGCGAGTCTGGTGTGAACACAACAT
 ACCAAGGCAGGGGCTGCTGTACATACCTTGGAAAGAATGGCCITGAAATTGACACAGGAAT
 CCATTACATTGGCGTATGGAAGAGGGCAGCATTGGCGTTTATCTGGACCAGATCACTG
 AAGGGCAGCTGGACTGGCTCCCTGTCCCTCTCTTGAACATCATGGTACTGGAAGGGCCC
 AATGGCCGAAAGGAGTACCCCATGTACAGTGGAGAGAAAGCCTACATCAGGGCCTCAAGGA
 GAAGTTCCACAGGAGGAAGCTACATTGACAAGTATAAAAGCTGGTTAAGGTGGTATCCA
 GTGGAGCCCTCATGCCATCCTGTTGAAATTCCCTCCATTGCCGTGGTCAGCTCCTCGAC
 AGGTGTGGCTGCTGACTCGTTCTCCATTCCCTCAAGCATTCCACCCAGAGCCTGGCTGA
 GGTCTGCAGCAGCTGGGGCCTCCTGTAGCAGCTCCAGGAGTACTCAGCTACATCTCCCCA
 CTTACGGTGTACCCCCAACCACAGTGCCTTCCATGCAAGCCCTGCTGGTCAACCAACTAC
 ATGAAAGGAGGCTTTATCCCCGAGGGGTTCCAGTGAAGATTGCTTCCACACCATCCCTGT
 GATTAGCGGGCTGGGGCGCTGCTCCTCACAAAGGCCACTGTGCAAGAGTGTGCTGGACT
 CAGCTGGGAAAGCCTGTGGTGTAGTGTGAAGAAGGGGATGAGCTGGTGAACATCTATTGC
 CCCATCGTGGCTCCAACGCAGGACTGTTAACACACTATGAACACACTACTGCCGGGAAACGC
 CCGCTGCCTGCCAGGTGTGAAGCAGCAACTGGGACGGTGCAGGCCGGCTTAGGCATGACCT
 CTGTTTCTCATCTGCCTGCAGGGCACCAAGGAAGACCTGCATCTGCCGTCCACCAACTACTAT
 GTTACTATGACACGGACATGGGACAGGGGATGGAGCGCTACGTCTCCATGCCAGGGAAAGA
 GGCTCGGGAAACACATCCCTCTTCTCTTCCATCAGCCAAAGATCCGACCTGGG
 AGGACCGATTCCAGGGCGTCCACCATGATCATGCTCATACCCACTGCCTACAGTGGTT
 GAGGAGTGGCAGGGAGCTGAAGGGAAAGCGGGCAGTGAAGTATGAGACCTTCAAAACTC
 CTTTGTGGAAAGCTCTATGTCAGTGGCTCTGAAACTGTTCCACAGCTGGAGGGAAAGGTGG
 AGAGTGTGACTCAGGATCCCCACTCACCAACCAAGTTCTATCTGGCTGCTCCCGAGGTGCC
 TGCTACGGGGCTGACCATGACCTGGCCCTGCACCCCTGTGTGATGGCCTCCTTGAGGGC
 CCAGAGCCCCATCCCCAACCTCTATCTGACAGGCCAGGATATCTCACCTGTGGACTGGTC
 GGGCCCTGCAAGGTGCCCTGTGCAAGCGCCATCCTGAAGCGGAACCTGTACTCAGAC
 CTTAAGAATCTTGATTCTAGGATCCGGGACAGAAAGAAAAGAATTAGTTCCATCAGGGAGG
 AGTCAGAGGAATTGCCCCATGGCTGGGCATCTCCCTGACTTACCCATAATGTCTTCTG
 CATTAGTTCTTGACGTATAAACACTCTAACCTGAAACTCTGCTTGTGATGCCGAAGAGAGGCCTAG
 TTAAATCACAATTCCAATCTGGGCAATGGAATCACTGCTTCCAGCTGGGGCAGGTGAGA
 TCTTACGCCCTTATAACATGCCATCCCTACTAACCTAGGATATTGACTTGGATAGCTTGATG
 TCTCATGACGAGCGGCCTCTGCATCCCTCACCATGCCCTTAACACTGATCAAAGCGA
 ATATTCCATCTGTGGATAGAACCCCTGGCAGTGTGTCAGCTAACCTGGGGTCAGTTC
 TGCTCTGAGGCTTCTGCTCTCATTTAGTGCTACGCTGACAGTTCTACACTGTCAAGG
 GAAAAGGGAGACTATGAGGCTTAACCTAACACCTGGCGTGGTTTGTTGCCCCATTCCATA
 GGTTGGAGAGCTAGATCTTTGTGCTGGGTCAGTGGCTCTCAGGGGACAGGAAAT
 GCCTGTGCTGGCCAGTGTGGTCTGGAGCTTGGGGTAACAGCAGGATCCATCAGTTAGTA
 GGGTCATGTCAGATGATCATATCCAATTGAAAGTCCGGGTCTGTCTCCTTATCA
 TCGGGGTGGCAGCTGGTCTCAATGTGCCAGCAGGGACTCAGTACCTGAGCCTCAATCAAGC
 CTTATCCACCAAATACACAGGGAAGGGTGTGCAAGGGAGGGTGACATCAGGAGTCAGGGCA
 TGGACTGGTAAGATGAATACTTGCTGGGCTGAAGCAGGCTGCAGGGCATTCCAGCCAAGGG
 CACAGCAGGGGACAGTGCAGGGAGGTGTGGGGTAAGGGAGGGAAAGTCACATCAGAAAAGGGA
 AAGCCACGGAATGTGTGAGGCCAGAAATGGCATTGCACTGAGTTAATTAGCACATGTGAGGG
 TTAGACAGGTAGGTGAATGCAAGCTCAAGGTTGGAAAAATGACTTTCAAGTTAGTATGTCTTG
 GTATCAGACATACGAAAGGTCTTTGTAGTTGTTAATGTAACATTAATAAAATTATTG
 ATTCCATTGCTTAAAAAAAAAAAAAA

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FIGURE 64

MWPLVLLLAVLLAVLCKVYLGLFSGSSPNPFSEDVKRPPAPLVTDKEARKVLKQAFSAN
QVPEKLDVVVIGSGFGGLAAAAILAKAGKRVLVLEQHTKAGGCCHTFGKNGLEFDTGIGHYIG
RMEEGSIGRFILDQITEGQLDWAPLSSPFDIMVLEGPNRKEYPMYSGEKAYIQGLKEKFPO
EEAIIDKYIKLVKVSSGAPHAILLKFLPLPVVQLLDRCGLLTRFSPFLQASTQSLAEVLQQ
LGASSELQAVLSYIFPTYGVTPNHSFSMHALLVNHYMKGGFYPRGGSSEIAFHТИPVIQRA
GGAVLTKATVQSVLDSAGKACGVVKKGHELVNIIYCPIVVSNAGLFNTYEHLLPGNARCLP
GVKQQLGTVRPGLGMTSVFICLRGTKEDLHLPSTNYYVYDMDQAMERYVSMPREEAAEH
IPLLFFAFPSAKDPTWEDRFPGRSTMIMLIPTAYEWFEWQAEKGKRGSDYETFKNSFVEA
SMSVVLKLFPQLEGKVESVTAGSPLTNQFYLAAPRGACYGADHDLGRLHPCVMASLRAQSPI
PNLYLTGQDIFTCGLVGALQGALLCSSAILKRNLYSDLKNLDSRIRAQKKKN

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FIGURE 65

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FIGURE 66

MRVRIGLTLCAVLLSLASASSDEEGSQDESLDSTTLTSDESVKDHTAGRVVAGQIFLD
SEEELESSIQEEEDSLKSQEGERVTEDISFLESPNPNKDYEEPKKVRKPALTAEIGTAHG
EPCHFPFLFLDKEYDECTS DGRREDGRLWCATTYDYKADEKWGFCETEEEAAKRRQMQEAE
YQTGMKILNGSNKKSQKREAYRYLQKAASMNHTKALERVSYALLFGDYLQPQNIQAAREMFEK
LTEEGSPKGQTALGFLYASGLGVNSSQAKALVYYTGFALGGNLIAHMVLVSRL

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FIGURE 67

CTTCCCAGCCCTGTGCCCAAAGCACCTGGAGCATATAGCCTTGAGAACTTCTACTTGCT
GCCTCCCTGCCTCTGGCCATGGCCTGCCGGTGCCTCAGCTTCCTCTGATGGGACCTCCT
GTCAGTTCCCAGACAGTCCTGCCAGCTGGATGCACGTGGTCTCCCAGGCCAAGTGG
CTCAACTCTCCTGCACGCTCAGCCCCAGCACGTACCATCAGGGACTACGGTGTGCCTGG
TACCAGCAGCGGGCAGGCAGTGCCCTCGATATCTCCTCTACTACCGCTCGGAGGAGGATCA
CCACCGGCCTGCTGACATCCCCGATCGATTCTCGGCAGCCAAGGATGAGGCCACAATGCCT
GTGTCCTCACCAATTAGTCCCGTGCAGCCTGAAGACGACGCCATTACTGCTCTGTTGGC
TACGGCTTAGTCCCTAGGGTGGGTGTGAGATGGGTGCCTCCCCTGCCTCCCATTCT
GCCCTGACCTTGGTCCCTTTAAACTTCTCTGAGCCTGCTCCCTGTAAAATGGG
TTAATAATATTCAACATGTCAACAAAC

FIGURE 68

MACRCLSFLLMGTFLSV р QTVL AQLD ALLVFPQVAQLSCTLSPQHVTIRDYGVSWYQQRAG
SAPRYLLYYRSEEDHHRPADIPDRFSAAKDEAHNACVLTISPQPEDDADYYCSVGYGFSP

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FIGURE 69

GCCGCCCCGCCCGAGACGGGCCGGGGCGCGGGGGATGCGGCGCCCGGGCG
 CGATGACCGCGGAGCGCACGCCGCCGGCCCTGACCCCGCCGCCGCTGAGCCC
 CCCGGCGAGGTGGACAGGGCAGA**TAG**ACGCCGAGCCCCCTGTTGCTGCTCCTGCTGCC
 CGCTGCTGCTGGGGCCTTCCCACCGGCCGCCGCCGAGGCCCCAAAGATGGCGAC
 AAGTGGTCCCACGGCAGGTGGCCGGCTGGGCCACTGTGCGGCTGAGTGGCA
 GGGGACCCGCCGCCGTGACCATGTGGACCAAGGAAGGATGGCCGACCATCCACAGCGGCTGGA
 GCGCTTCGCGTGCTGCCGAGGGCTGAAGGTGAAGCAGGTGGAGGGAGGATGCC
 GTGTACGTGTGCAAGGCCACCAACGGCTCGGCAGCCTGAGCGTCAACTACACCTCGTC
 GCTGGATGACATTAGCCCAGGGAGAGGAGGCCCTGGGCCAGCTCCTCTGGGGTCAAG
 AGGACCCCGCCAGCCAGCAGTGGCACGACCGCCTCACACAGCCCTCAAGATGAGGC
 CGGGTATCGCACGGCCGTGGTAGCTCCGTGCCCTCAAGTGCCTGGCCAGCGGGCACCC
 TCGGCCCACATCACGTGGATGAAGGACGACCAGGCCTGACGCCAGAGGGCGCTGAGC
 CCAGGAAGAAGAAGTGGACACTGAGCCTGAAGAACCTGCGGCCAGGACAGCGGAAATAC
 ACCTGCGCGTGTGCAACCGCGGGGCCATCAACGCCACCTACAAGGTGGATGTGATCCA
 GCGGACCCGTTCAAGCCGTGCTCACAGGCACGCACCCCGTAACACAGACGGTGGACTTC
 GGGGACACGTCCTCCAGTGCAGGTGCGCAGCGACGTGAAGCCGGTATCCAGTGGCTG
 AAGCGCGTGGAGTACGGCGCCGAGGGCCCAAACTCCACCATCGATGTGGCGGCCAGAA
 GTTTGTGGTGTGCTGCCACGGGTGACGTGTGGTGCACGGCTCCTACCTCAATAAGC
 TGCTCATCACCGTGCCTGCCACGGACGATGCGGCATGTACATCTGCCTGGCGCAACACC
 ATGGGCTACAGCTCCGAGCGCCTTCACCGTGTGCCAGACCCAAAACGCCAGGGCC
 ACCTGTGGCCTCCTCGCCTCGCCACTAGCCTGCCGTGGCCGTGGTATCGGCATCCCAG
 CCGCGCTGTCTCATCTGGCACCCCTGCTCCTGTGGCTTGCAGGCCAGAAGAAGCC
 TGCACCCCCCGCGCTGCCCTCCCTGCCCTGGCACCGCCGCCGGACGGCCCGCACCG
 CAGCGGAGACAAGGACCTCCCTGTTGCCGCCCTCAGCGCTGGCCCTGGTGTGGGCTG
 GTGAGGAGCATGGGTCTCGGCAGCCCCCAGCACTTACTGGGCCAGGCCAGTTGCTGG
 CCTAAGTTGACCCAAACTACACAGACATCCACACACACACACACTCTCACAC
 ACACACACAGTGGAGGGCAAGGTCCACAGCACATCCACTATCAGTGT**AG**ACGGCACCG
 ATCTGCAGTGGGACGGGGGGCGCCAGACAGGCAGACTGGGAGGATGGAGGACGGAGCT
 GCAGACGAAGGCAGGGGACCCATGGCGAGGAGGAATGGCCAGCACCCAGGCAGTGTGT
 TGAGGCATAGCCCCTGGACACACACACAGACACACACTACCTGGATGCATGTATGCAC
 ACACATGCGCGCACAGTGTCCCTGAAGGCACACAGTACGCACAGCACATGCACAGATATG
 CGCCTGGCACACAGATAAGCTGCCAAATGCACGCACAGCACAGACATGCCAGAAC
 TACAAGGACATGCTGCCTGAACATACACAGCACACCCATGCGCAGATGTGCTGCCTGG
 ACACACACACACGGATATGCTGTGGACGCACACAGTGCAGATATGGTATCGGACACA
 CACGTGCACAGATATGCTGCCTGGACACACAGATAATGCTGCCTTGACACACACATGCACGG
 ATATTGCCTGGACACACACACACACAGCGTGCACAGATATGCTGTCTGGACACGCACAC
 ACATGCAGATATGCTGCCTGGACACACACTCCAGACACAGCGTGCACAGGCAGATATGCT
 GCCTGGACACACGCAGATATGCTGTCTAGTCACACACACAGCAGACATGCTGTCCGGACAC
 ACACACGCATGCACAGATATGCTGTCCGGACACACACACAGCAGCAGATATGCTGCCTGG
 ACACACACAGATAATGCTGCCTCAACACTCACACAGTGCAGATATTGCCTGGACACACACA
 TGTGCACAGATATGCTGTCTGGACATGCACACACAGTGCAGATATGCTGTCCGGACACACAC
 CACGCACACATGCAGATATGCTGCCTGGACACACACTCCGGACACACATGCACACACAGGT
 GCAGATATGCTGCCTGGACACACACAGATAATGCTGCCTCAACACTCACACAGTGCAGA
 TATTGCCTGGACACACACATGTGCACAGATATGCTGTCTGGACATGCACACACAGTGCAGATA
 TGCTGTCCGGATACACACAGCAGCACACATGCAGATATGCTGCCTGGACACACACTCCGG
 ACACATGCACACACAGGTGCAGATATGCTGCCTGGACACACAGCAGACTGACGTGCTTTGG
 GAGGGTGTGCGTGAAGCCGTGAGTACGTGTGGCGTGGCTCATAGTGTGAGGGACTT
 CCCTGCTCCACCGTCACCCCCAACCTGTGCCCCGCTCTGCCCCGCTCAGTCCCCGCTC
 CATCCCCGCTCTGTCCCCCTGGCCTTGGCGGCTATTGGCCTGGACACAGCAGCCCCAAGC
 AGTCCCCACTGTGTGGCTGGGTTGGGGCACAGCAGCCCCAAGCCTGAGAGGGCTGGAG
 CCCATGGCTAGTGGCTCATCCCCAGTGCATTCTCCCCCTGACACACAGAGAAGGGCCTTGG
 TTTATATTAAAGAAATGAAGATAATATTAAATAATGATGGAAGGAAGACTGGGTTGCAGGGAC
 TGTGGTCTCTCTGGGGCCGGGACCCGCTGGTCTTCAGCCATGCTGATGACACACAC
 GTCCAGGCCAGACACCACCCCCCAGACTGTGCGTGGCCCCAGATCTCTGTAATT
 TGTAGAGTTGAGCTGAAGCCCCGTATATTAAACACACAAAA

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FIGURE 70

MTPSPLLLLLPPPLLGAFPPAAAARGPPKMADKVVPRQVARLGRTVRLQCPVEGDPPPLTM
WTKDGRTIHSGWSRFRVLPQGLKVKQVEREDAGVVCKATNGFGSLSVNYTLVVLDDISPGK
ESLGPDSSSGQEDPASQQWARPRFTQPSKMRRIIARPVGSSVRLKCVASGHPRPDITWMK
DDQALTRPEAAEPRKKWTLSLKNLRPEDSGKYTCRVSNRAGAINATYKVDVIQRTRSKPVL
TGTHPVNTTVDFGGTTSFQCKVRSDVKPVIQWLKRVEYGAEGRHNSTIDVGGQKFVVLPTGD
VWSRPDGSYLNKLLITRARQDDAGMYICLGANTMGYSFRSAFLTVLPDPKPPGPPVASSSSA
TSLPWVIVIGIPAGAVFILGTLLLWLCQAQKKPCTPAPAPPLPGHRPPGTARDRSGDKDLPS
LAALSAGPGVGLCEEHGSAPAQPQHLLGP GPVAGPKLYPKLYTDIHTHTHSHTHSHVEGKV
HQHIHYQC

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FIGURE 71A

CCCAGCTGAGGAGCCCTGCTCAAGACACGGTCACTGGATCTGAGAAACTTCCCAGGGGACCG
 CATTCCAGAGTCAGTGACTCTGTGAAGCACCCACATCTACCTCTGCCACGTTCCCACGGGC
 TTGGGGAAAGATGGTGGGGACCAAGGCCTGGGTGTTCTCCTCTGGCCTGGAAAGTCACA
 TCTGTGTTGGGGAGACAGACGATGCTCACCCAGTCAGTAAGAAGAGTCAGCCTGGGAAGAA
 GAACCCCAGCATCTTGCCAAGCCTGCCAGACACCCTGGAGAGGCCCTGGTGGAGTGGACAA
 GGTTCAACATCGACTACCAGGGGGAAAGGGGACTATGAGCCGCTGGACGCCATTGCTC
 TACTATGGGGACCCTGATGTGCCGCTCCCCCTGCCGCTAGAGGCTCGGACCACTGACTGGAC
 ACCTGCCGGCAGCACTGCCAGGTGGTCCATGGTAGTCCCCGTGAGGGTTCTGGTGCCTCA
 ACAGGGAGCAGGCCCTGCCAGAACTGCTCTAACACCGTACGCTTCTCTGCCACCA
 GGATCCCCTGCCCGAGACACAGAGCGCATCTGGAGCCCATGGTCTCCCTGGAGCAAGTGCTC
 AGCTGCCCTGTTGTCAGACTGGGGTCCAGACTCGCACACGCATTGCTTGGCAGAGATGGTGT
 CGCTGCACTGAGGCCAGCGAAGAGGGTCAAGCACTGATGGCCAGGACTGTACAGCCTGT
 GACCTGACCTGCCAATGGGCCAGGTGAATGCTGACTGTGATGCCCTGCATGTGCCAGGACTT
 CATGCTTCAATGGGCTGTCTCCCTCCGGAGGTGCCAGCCTCAGGGGCTGCTATCTACC
 TCCTGACCAAGACGCCAGCTGCTGACCCAGACAGACAGTGAATGGGAGATTCCAATCCCT
 GGCTGTGCCCTGATGGCAAAAGCATCTGAAGATCACAAAGGTCAAGTTGCCCCATTGT
 ACTCACAATGCCAAGACTAGCCTGAAGGCAGCCACCATCAAGGCAGAGTTGTGAGGGCAG
 AGACTCCATACTGGTGAACCTGAGACAAAAGCACGGAGAGCTGGCAGAGCGTGTCT
 CTGTGCTGTAAGGCCACAGGGAAAGCCCAGGCCAGACAAGTATTTGGTATCATAATGACAC
 ATTGCTGGATCCTCCCTCTACAAGCATGAGAGCAAGCTGGTGTGAGGAAACTGCAGCAGC
 ACCAGGCTGGGGAGTACTTTGCAAGGCCAGAGTGAATGCTGGGCTGTGAAGTCCAAGGTT
 GCCCAGCTGATTGTCACAGCATCTGATGAGACTCCTGCAACCCAGTCTGAGAGCTATCT
 TATCGGCTGCCCATGATTGCTTCAGAATGCCACCAACTCCTCTACTATGACGTGGAC
 GCTGCCCTGTTAAGACTTGTGCAGGGCAGCAGGATAATGGGATCAGGTGCCGTATGCTGTG
 CAGAACTGCTGTGGCATCTCAAGACAGAGGAAAGGGAGATCCAGTGAGTGGCTACACGCT
 ACCCACCAAGGTGCCAAGGAGTGCAGCTGCCAGCGGTGACGGAAACTCGGAGCATGTGC
 GGGCCGTGTCAGTGCTGACAATGGGAGCCATGCGCTTGGCATGTGTACATGGG
 AACAGCCGTGAAGCATGACTGGCTACAAGGGCACTTACCCCTCCATGTCCCCCAGGACAC
 TGAGAGGCTGGTGCACATTGTGGACAGGCTGAGAAGTTGTCAACACCACCAAAGTGC
 TACCTTCAACAAGAAGGGGAGTGCCTGTTGAGAAATCAAGATGCTCGTGGAAAGAG
 CCCATCACTTGGAAAGCCATGGAGACCAACATCATCCCCCTGGGGAAAGTGGTTGGTAAGA
 CCCATGGCTGAACTGGAGATTCCATCCAGGAGTTCTACAGGCAGAATGGGAGGCCCTACA
 TAGGAAAAGTGAAGGCCAGTGTGACCTTCCCTGGATCCCCGGAAATTTCCACAGCCACAGCT
 GCCCAGACTGACCTGAACCTCATCAATGACGAAGGAGACACTTCCCCCTCGGACGTATGG
 CATGTTCTGTGGACTTCAGAGATGAGGTCAACCTCAGAGCACAATTCAACAGTCAAAGTGA
 AGGTCCACCTGACTCGACCCAGGTCAAGATGCCAGAGCACATATCCACAGTCAAAGTCTGG
 TCACTCAATCCAGACACAGGGCTGTGGGAGGAGGAAGGTGATTTCAAATTGAAAATCAAAG
 GAGGAACAAAAGAGAAGACAGAACCTTCCCTGGTGGCAACCTGGAGATTGAGAGGAGGC
 TCTTTAACCTGGATGTCTGAAAGCAGGGCTGCTTGTAAAGGTGAGGGCTACCGGAGT
 GAGAGGACTCTGCCCTAGTGAGCAGATCCAGGGGTTGTGATCTCCGTGATTAACCTGGAGCC
 TAGAAACTGGCTCTTGCCAACCTAGGGCTGGGCCGCTTGACAGTGTCACTACAGGCC
 CCAACGGGGCTGTGTGCTGCCCTGTGATGACCGAGTCCCTGATGCCCTACTCTGCCAT
 GTCTGGCAAGCCTGGCTGGGGAGGAACCTGCAAGCAGTGGAGTCTCTCCTAAATTCAACCC
 AAATGCAATTGGCTCCCTCAGCCCTATCTCAACAAGCTCAACTACCGTCGGACGGACCATG
 AGGATCCACGGGTTAAAAGACAGCTTCCAGATTAGCATGCCAAGCCAAGGCCAACTCA
 GCTGAGGAGAGCAATGGGCCACATCTATGCCCTTGAGAACCTCCGGCATGTGAAGAGGCACC
 ACCCAGTGCAGCCCACCTCCGGTCTACCGAGATTGAGGGGATCGATATGACTACAACACAG
 TCCCCTCAACGAAGATGACCTATGAGCTGGACTGAAGACTATCTGGCATGGTGGCAAAG
 CCGATGGAATTAGGGCTGCTATATCAAGGTGAAGATTGTGGGGCACTGGAAGTGAATGT
 GCGATCCCGCAACATGGGGGCACTCATGGCGGACAGTGGGAAGCTGTATGGAATCCGAG
 ATGTGAGGAGCACTGGGACAGGGACCAGGCCAATGTCTCAGCTGCCGTCTGGAGTTCAAG
 TGCACTGGGATGCTCTATGATCAGGACCGTGTGGACCGCACCTGGTGAAGGTCACTCCCCCA
 GGGCAGCTGCCGTGAGGCCAGTGTGAACCCATGCTGATGAGTACCTGGTCAACCACCTG
 CACTTGAGTCACAAACGACACCAGTGAGTACACCATGCTGGCACCCCTGGACCCACTGGGC
 CACAACATGGCATCTACACTGTCAGTGACCAAGGCCCTGCCAGGCCAAGGAGATCGCCT
 CGGGCGGTGCTTGATGGCACATCCGATGGCTCCTCCAGAACATCATGAGAGCAATGTGGAG
 TAGCCCTCACCTCAACTGTGTAGAGAGGCAAGTAGGCCAGAGTGCCTTCAGTACCTC
 CAAAGCACCCAGGCCAGTCCCTGCTGCAGGCAGTGTCCAAGGAAGAGTGCCTCGAGGAG
 GCAGCAGCGAGCGAGCAGGGTGGCCAGCGCAGGGTGGAGTGGTGGCCTCTGAGATTTC

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FIGURE 71B

CTAGAGTTGCTAACAGCCCTGATCAACTAAAGTTGTGGTACTTCACCCCTTCTGCCCT
CATTTCATGTGACAGCCATTGTGAGACTGATGCACAAACTGTCACTGGTTAATTAAAGCAC
TTCTGTTTCTGAATTGCTTGTGTTCTTCATGCCTTACTTACTTGCCCCATGCTA
CTGATTGGCACGTGGCCCCACAATGGCACAAATAAAGCCCCTTGTGAAACTGTTCTTAAA
TGAAACACAAGAAATTGGCCACTGGTAAACTCTGCAGCTTCAACTGTACTTCATTAAATGC
CATTAATGCAAATATACTTCCTCTTCTTGCATGGTTTGCCCACCTCTGCAATAGTGAT
AATCTGATGCTGAAGATCAAATAACCAATATAAACATATTCTTGCCTTGCTCCACAGGA
CATAGGCAAGCCTTGATCATAGTTCATACATATAAATGGGGTGAATAAAGAAATAAAACA
CAATACTTTACTTGAATGTAATAACTTATTATTTCTTGCTAAATTGGAATTCTAGT
GCACATTCAAAGTTAAGCTATTAAATATAGGGTGATCATAGTTCTACCAAGTCTGGAAA
GAACATCTCCTGGTATCCACAATTACACCAGGGTCTAACTGTATTGTACATTCCCTTG
CATTGCTTTGTTCTGCTAGAAACCCAGTGTAGCCCAGGGCAGATGTCAATAATGCATA
CTCTGTATTCGAAAAAA

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FIGURE 72

MVGTKAWVFSFLVLEVTSLGRQMLTQS VRRVQPGKKNPSIFAKPADTLESPGEWTTWFNI
DYPGGKGDYERLDAIRFYGYDRVCARPLRLEARTTDWT PAGSTGQVVHGS PREGFWCLNREQ
RPGQNCNSNYTVRFLCPPGSLRRDTERIWSPSPWSKCSAACGQTGVQTRTRICLAEMVSLCS
EASEEGQHCMQDCTACDLTCPMGQVNADCDACMCQDFMLHGA VSLPGGAPASGAAIYLLTK
TPKLLTQTDSDGRFRI PGLCPDGKSILKITKVKFAPIVLTMPKTS LKAATIKA EFVRAETPY
MVMNPETKARRAGQS VSLCCKATGKPRPDKYFWYHNDTLLDPSLYKHE SKLVRKLQQHQAG
EYFCKAQSDAGAVKS KVAQLIVTASDET PCNPVPESYLI RLPHD C FQNATNSFYYDVGRCPV
KTCAGQQDNGIRCRDAVQNC CGISKTEEREIQC SGYTLPTKVAKECSCQRCTETRSIVRG RV
SAADNGEPMRFGH VYMGNSRVSM TGYKGFTLHVPQ DTERLVLTFVDRLQKFVN TT KVLP FN
KKGS AVFHEIKMLRRKEPI TLEAMETNI I PLGEVVG EDPM AELEIPSRSF YRQNGE PYIG KV
KASVTFLDPRNISTATAAQ TDLNFINDEGDTFPLRTYGMFSVDFRDEV TSEPLNAGKV KVHL
DSTQVKMPEHISTV KLW SLPDTGLWEEEGDFKFENQRRNKREDRTFLVGNLEIRERRLFNL
DVPESRRCFVKV RAYR SERFLPSEQIQGVV VISVINLEPRTGFLSNPRAWGRFD SVITGPNGA
CVPAFCDDQSPDAY SAYV LASL AGEELQ AVESSPKFNPNAIGV PQYLNKL NYR RTDHED PR
VKKTAFQISMAKPRPNSAEE NGPIYAFENLRACEE APPSAAHFRFYQIEGDRYDYNTVPFN
EDDPMSWTEDYLAWWPKPM EFRACYIKV KIVGPLEVN VRSRN MGGTH RRTVGKLYGIRD VRS
TRDRDQP NVSAAC LEFKCSGMLYD QDRV DRTL V KVIPQ GSCRRASVN PMLHEYLVN HPLAV
NN DTSE YTMLAPLDPLGH NYGIYT VTDQ DPRTAKEIAL GR CF DGT SDGSSRIMKS NVG VALT
FNCVERQVGRQSAFQYLQ STPAQ SPAAGTVQGRVPSRRQQ RASRG GQRQGGVVASL RFPRVA
QQPLIN

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FIGURE 73

CTGCAAGTTGTTAACGCCAACACACAAGTATGTTAGGCTTCCACAAAGTCCTCAATATACTGAATACGCACAATATCTTAACTCTCATATTGGTTTGGGATCTGCTTGAGGTCCCATCTTCATTTAAAAAAAATACAGAGACCTACCTACCGTACGCATACATACATATGTGTATATATATGTAAACTAGACAAAGATCGCAGATCATAAAGCAAGCTCTGCTTAGTTCCAAGAAGATTACAAAGAATTAGAG**ATG**TATTGTCAGATCCCTGTCGATTCATGCCCTTGGGTTACGGTGCCTCAGTGATGCCCTACCCCTGGGACATTATGATTGTAAGACTCAGTTACACGGAAATCCACGGACA TGACAAAATATCTGAAAGTGAACACTCGATCCTCCGGATTACCTGTGGAGACCCCTGAGACGTTCTGTGCAATGGCAATCCCTACATGTGCAATAATGAGTGTGATGCGAGTACCCCTGAGCTGGCACACCCCCCTGAGCTGATGTTGATTGAGGAAGACATCCCTCCACATTGGCAGTCTGCCACTTGGAAAGGAGTATCCCAAGCCTCTCAGGTTAACATCACTCTGTCTGGAGC AAAACCATTGAGCTAACAGACAACATAGTTATTACCTTGAATCTGGCGTCCAGACCAAATGATCCTGGAGAAGTCTCTCGATTATGGACGAACATGGCAGCCCTATCAGTATTATGCCACAGACTGCTTAGATGCTTTCACATGGATCCTAAATCCGTGAAGGATTATCACAGCATACTGGC TTAGAAATCATTGACAGAAAGAGTACTCAACAGGGTATAACAACAAATAGCAAAATAATCCA CTTTGAATCAAAGACAGGTTCGCGTTTGCTGGACCTCGCTACGCAATATGGCTTCCC TCTACGGACAGCTGGATACAACCAAGAAACTCAGAGATTCTTACAGTCACAGACCTGAGGATAAGGCTGTTAACAGCCGGTGGGAAATATTGTAGATGAGCTACACTTGGCACGCTA CTTTACGCGATCTCAGACATAAAGGTGCGAGGAAGGTGCAAGTGTAAATCTCCATGCCACTGTATGTGTGTATGACAACAGCAAATTGACATGCGAATGTGAGCACAAACACTACAGGTCCAGAC TGTGGAAATGCAAGAAGAATTATCAGGGCGACCTTGGAGTCCAGGCTCTATCTCCCCATCCCCAAAGGCACTGCAAATACTGTATCCCCAGTATTCCAGTATTGGTACGAATGTCTGCGACAACGAGCTCCTGCACGCCAGGGACGTGCCACAACACGTGCGCTGCCTGTGCGCCGGCATACACGGCATCCTCTGCGAGAAGCTGCGGTGCGAGGAGGCTGGCAGCTGCGGCTCCGACTCTGCCAGGGCGCCGGCCCCCGACGGCACCCAGCGCTGCTGCTGACCAACGCTGGGAACCGCCAGCCCCCTGGTGTCT**AGGTGTCACCTCCAGCCACACCGGACGGCCT** GTGCCGTGGGAAGCAGACACAACCAAACATTGCTACTAACATAGGAAACACACACATACAGACACCCCCACTCAGACAGTGTACAAACTAAGAAGGCCTAACTGAACACTAACCGCATATTATCACCCGTGGACAGCACATCCGAGTCAAGACTGTTAATTCTGACTCCAGGGAGTTGGCAGCTGTTGATATTACTGCAAATCACATTGCCAGCTGCGAGCATATTGTGGATTGGAAAGGCAGCAGCAGCCCCAAACAGGAAAGACAAAAACAAACAAACCGACCTAAAACATTG GCTACTCTAGCGTGGTGCGCCCTAGTACGACTCCGCCAGTGTGTGGACCAACCAAATAGCA TTCTTGTGTCAGGTGCAATTGTTGGCATAAGGAAATCTGTTAACAGCTGCCATATTGGCCTGCTCCGTCCTGAATCCCTCAACCTGTGCTTAGTGAACGTTGCTCTGTAACCCTCGTTGGTGAAGGATTCTTGTCTGATGTTAGTGCACATGTGTAACAGCCCCCTCTAAAGCGCAAGCCAGTCATACCCCTGTATATCTTAGCAGCACTGAGTCCAGTGGCAGCACACACCCAC TATACAAGAGTGGCTATAGGAAAAAGAAAGTGTATCTATCCTTTGTATTCAAATGAAGTT ATTGTTCTGAACTACTGTAATATGTAGATTGTTGTATTATTGCCAATTGTTTGTGTTACCAAGAATCTGTTAATGCAATTCTAAGATGAAAGGAAACAGCCACCAAGCAGTGTGCTGGCATCAAA GAATATCAGTTACATATATAACAAGTGTAAATAAGATTCCACCAAGGACATTCTAAATGTT TTCTTGTGCTTAAACACTGGAAGATTAAAGAATAAAACTCCTGCATAACGATTTCAAGGAAATTGCAATTCTTAAGATGAAAGGAACAGCCACCAAGCAGTGTGCTGGCATCAACTGATTACTGATTCTGTGTTGACTGAGTACATTCAAGCTGACGAAATTAGTTCCACAGGAAGATGGATTGATGTTCACTAGCTGGACAACTCTGCAAAATATGAGACTATTCCACTTGGGAAAAATTA CAACAGCAAAAAAAAAAAAAAA

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FIGURE 74

MYLSRSLSIHALWTVSSVMQPYPLVGHDLCKTQIYTEEGKVWDYMACQPESTDMTKYLK
VKLDPPDITCGDPPETFCAMGNPYMCNNEDASTPELAHPPELMFDFEGRHPSTFWQSATWK
EYPKPLQVNITLSWSKTIELTDNIVITFESGRPDQMILEKSLDYGRTWQPYQYYATDCLDAF
HMDPKSVKDLSQHTVLEIICTEEYSTGYTTNSKIIHFEIKDRFALFAGPRLRNMASLYGQLD
TTKKLRDFFTVDLIRIRLLRPAVGEIFVDELHLARYFYAISDIKVRGRCKCNLHATVCVYDN
SKLTCECEHNTTGPDCGKCKKNYQGRPWSPGSYLPIPKGTANTCIPSISIIGTNVCDNELLH
CQNGGTCHNNVRCLCPAAYTGILCEKLRCCEAGSCGSDSGQGAPPHGTPALLLTLLGTAS
PLVF

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FIGURE 75

CCACCGCGTCCGGGTGACCTGGGCCGAGCCCTCCCGTCGGCTAAGATTGCTGAGGAGGC
CGGGTAGCTGGCAGGCCCGACTTCCGAAGGCCGCCGTCCGGCGAGGTGTCCTCATGACTT
CTCTTGACCAATGTCCGTGATCTTTGCCTGCGTGGTACGGTAAGGGATGGACTGCC
CCTCTCAGCCTCTACTGATTTTACACACCCAAGATTTTGAATGGAGGAGACGGCTCA
AGAGTTAGCCTTGCAGTGGCCCAGTATCCAGGTCGAGGTTCTGCAGAAGGTTGTGACTTT
AGTATACTTTCTTCTTCGGGACGTGGCCTGCATGGCTATCTGCTCCTGCCAGTGTCC
AGCAGCCATGGCCTCTGCTTCCAGGCCATACGCTTCTTGAGTTGACAGCATCATTCA
CTACCTGCATTGGCCTAGCCTCAGGCCATACGCTTCTTGAGTTGACAGCATCATTCA
AAAGTGAAGTGGCATTAACTATGTAAGTCCCTCAGATGGAGTGCAGCTGGAAAAAAAT
TCAGGAGGAGCTCAAGTTGCAGCCTCCAGCGTTCTCACTCTGGAGGACACAGATGTGGCAA
ATGGGGTGAATGGTCACACACCGATGCACTTGGAGCCTGCTCCTAATTCCAATGGAA
CCAGTGACAGCCCTGGGTATCCTCTCCCTCATTCTAACATCATGTGTGCTGCCCTGAATCT
CATTGAGGAGTTCACCTGCAGAACATTCTTACAGGATCCAAGGAGCTGGTCTGCTGGT
TGGACAAACCTCGTGAGCCAGCCACCCCTGACCCAAATGAGGAGAGCTCTGATTCTCCAT
CCGGGAGCAGTGATGTCAGTCAAACCTCTGCTGCTGGGAAATCTCATCAGCAGGGAGCCTGTGGA
AAAGGGCATGTCAGTCAAATCTGGGAATGGCTGGATTGAAACATCTGCCATGTGTATTG
ATGGCAGAGCTGTTGCCACAAGCGCCTTTATTAGGGTAAAATTAAACAAATCCATTCTAT
TCCTCTGACCCATGCTTAGTACATATGACCTTAACCCTACATTATGATTCTGGGTT
GCTTCAGAAGTGTATTTCATGAATCATCATGATTGATCCCCAGGATTCTATTGTT
TTAATGGGCTTTCTACTAAAAGCATAAAACTGAGGCTGATTAGTCAGGGCAAACCAT
TTACTTACATATCGTTCAATACTTGCTGTTACACAAGCTTACGGTT
TTGTAACAATAAAATTTGAGTAAATAATGGGTACATTAAACAAACTCAGTAGTACAACC
TAAACTGTATAAAAGTGTGTAAAATGTATAGCCATTATCCTATGTATAAATTAAATG
AGGTGGCTTCAGAAATGGCAGAATAATCTAAAGTGTATTAAAAA
AAAAG

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FIGURE 76

MSVIFFACVVVRDGLPLSASTDFYHTQDFLEWRRRLKSLALRLAQYPGRGSAEGCDFSIHF
SSFGDVACMAICSCQCPAAMAFCFLETWLWWEFTASYDTTCIGLASRPYAFLEFDSIIQKVKW
HFNYVSSSQMECSLEKIQEELKLQPPAVLTLEDTDVANGVMNGHTPMHLEPAPNFRMEEPVTA
LGILSLILNIMCAALNLIRGVHLAEHSLQDPRSWFCWLDQTS

FIGURE 77

TGCTTCCTGGAGACCCTGTGGTGGGAATTACAGCTTCNTATGACACTACCTGCATTGGCNT
AGCCTCCAGGCCATACGCTTTCTTGAGTTGACAGCATCATTAGAAAGTGAAGTGGCATT
TTAACTATGTAAGTTCTNTCAGATGGAGTGAGCTTGGAAAAAATTCAAGGAGGAGCTCAAG
TTGCAGCCTCCAGCGTTCTCANTATGGAGGACACAGATGTGGCAAATGGGT

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FIGURE 78

CTCAGCGGCGCTTCCTCGTAGCGAGCCTAGTGGCGGGTGTTCATTGAAACGTGAGCGCGA
CCCGACCTTAAAGAGTGGGAGCAAAGGGAGGACAGAGCCCTTAAAACGAGGCGGGTGGTG
CCTGCCCTTAAGGGCGGGCGTCCGGACGACTGTATCTGAGCCCCAGACTGCCCGAGTT
TCTGTCGAGGCTGCGAGGAAAGGCCCTAGGCTGGGTCTGGGTCTGGCGGGCGGCTT
CCTCCCCGCTCGTCCTCCCCGGGCCAGAGGCACCTCGGCTTCAGTCATGCTGAGCAGAGTA
TGGAAGCACCTGACTACGAAGTGCTATCCGTGCGAGAACAGCTATTCCACGAGAGGATCCGC
GAGTGTATTATCAACACTCTGTTGCAACACTGTACATCCTCTGCCACATCTTCCTGAC
CCGCTTCAAGAACGCGTGTGAGTCACCACAGTGGATGATGAAGATGCCACCGTCAACAAGA
TTGCGCTCGAGCTGTGACCTTACCGTGGCAATTGCCCTGGGTGCTGCTCTGCTCCTGCC
TTCTCCATCATCAGCAATGAGGTGCTGCTCCCTGCCCTGGAACCTTGTGTTCTCTCCCCAAC
CAACGGCTCCCTCATCCATGGCCTCTGGAACCTTGTGTTCTCTCCCCAAC
TCTTCCTCATGCCCTTGCAATTCTCACTGAGCTGAGGGCTTGCTGGCTCCAGAAAG
GGTGCCTGGGCCGGTCTATGAGACAGTGGTGATGTTGATGCTCCTCACTCTGCTGGTGCT
AGGTATGGTGTGGTGACGCCATTGTGGACAAGAACAGGCCAACAGAGAGTC
ATGACTTTGGGAGTACTATCTCCCTACCTCTACTCATGCATCTCCTCCTGGGTTCTG
CTGCTCCTGGTGTACTCCACTGGGCTCGCCCCGATGTTCTCCGTACTGGGAAGCTGCT
AGTCAAGCCCCGGCTGCTGGAAAGACCTGGAGGAGCAGCTGACTGCTCAGCCTTGAGGAGG
CAGCCCTGACCCGAGGATCTGTAATTCTACTTCCTGCTGGCTGCCTTAGACATGGAGCTG
CTACACAGACAGGTCTGGCTCTGCAGACACAGAGGGCTGCTGGAGAACAGAGGCCAGG
TTCAGCCTGGCAACGGAACCTGGCTACCCCTGGCTATGCTGTGCTTGCTGCTGACGG
GCCTGTCTGTGCTATTGTGGCCATCCACATCCTGGAGCTGCTCATCGATGAGGCTGCCATG
CCCCAGGGCATGCAGGGTACCTCTTAGGCCAGGTCTCCTCCAAGCTGGCTCCTTGG
TGCGTCATTCAAGGTTGACTCATCTTACCTAAATGGTGTCTCAGTTGTTGCTTCTATA
GCTCTCACTCTCCGGAGCCTGCGGCCAGATGGCACGACACTGCCATGACGAGATAATT
GGGAACTGTGCTGTCTGGCTTAAGCTCAGCACTCCCTGTCTCTCTCGAACCCCTGG
GCTCACTCGCTTGACCTGCTGGGTGACTTTGGACGCTTCAACTGGCTGGCAATTCTACA
TTGTGTTCTCTACAACGCAGCCTTGCAAGGCTCACCACACTCTGCTGGTGAAGACCTC
ACTGCAGCTGTGCGGGAGAGCTGATCCGGCCTTGGCTGGACAGACTGCCGCTGCCGT
CTCCGGTTCCCCCAGGCATCTAGGAAGACCCAGCACCAGTGACCTCCAGCTGGGGTGGGA
AGGAAAAAAACTGGACACTGCCATCTGCTGCCTAGGCCTGGAGGGAAAGCCAAGGCTACTTGG
ACCTCAGGACCTGGAATCTGAGAGGGTGGTGGCAGAGGGAGCAGAGCCATCTGCACTATT
GCATAATCTGAGCCAGAGTTGGGACCAAGGACCTCTGCTTTCCATACTTAACGTGGCCT
CAGCATGGGTAGGGCTGGGTGACTGGGTCTAGCCCTGATCCAAATCTGTTACACATCA
ATCTGCCTCACTGCTGTTCTGGCCATCCCCATAGCCATGTTACATGATTGATGTGCAAT
AGGGTGGGTAGGGCAGGGAAAGGACTGGGCCAGGGCAGGCTCGGGAGATAGATTGTCTCC
CTTGCCTCTGGCCAGCAGGCCAAGCCTAAGCAGACTGTGCTATCCTGGAGGGCTTGGAC
AAAGACCAAGGGGATAGGGAGGAGGAGGCTCAGCCATCAGCAATAAGTTGATCCCAGGGA
AAAAAA

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FIGURE 79

MEAPDYEVLSVREQLFHERIRECIISTLLFATLYILCHIFLTRFKPAEFTTVDDEDATVNK
IALELCTFTLAIALGAVLLLPSIISNEVLLSLPRNYYIQWLNGSLIHGLWNLVFLFPNLSL
IFLMPFAYFFTESEGFAGSRKGVLGRVYETVVMLMLTLLVLGMVWVASAIVDKNKANRESL
YDFWEYYLPYLYSCISFLGVLLLVCPLGLARMFSVTGKLLVKPRLLEDLEEQLYCSAFEEL
AALTRRICNPTSCWLPLDMELLHRQVLALQTQRVLLEKRRKASAWQRNLGYPLAMLCLLVLT
GLSVLIVAIHILELLIDEAAMPRGMQGTSLGQVSFSKLGSFGAVIQVVLIFYLMVSSVVGFY
SSPLFRSLRPRWHDTAMTQIIGNCVCLVLSSALPVFSRTLGLTRFDLLGDFGRFNWLGNFY
IVFLYNAAFAGLTTLCLVKTFTAAVRAELIRAFGLDRPLPVSGFPQASRKTQHQ

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FIGURE 80

GGCTGCCGAGGGAAGGCCCTGGTTGGCTTGGTGCTGGCGGCGGGNTTCNTCCCC
GCTCGTCCTCCCCGGGCCAGAGGCACCTCGGCTTCAGTCATGCTGAGCAGAGTATGGAAGC
ACCTGACTACGAAGTGCTATCCGTGCGAGAACAGCTATTCCACGAGAGGATCCGCGAGTGTA
TTATATCAACACTTCTGTTGCAACACTGTACATCCTCTGCCACATCTCCTGACCCGCTTC
AAGAACGCTGCTGAGTTACCACAGTGGATGATGAAGATGCCACCG

FIGURE 81

GACCGACCTAAAGAGTGGGAGCAAAGGGAGGACAGAGCCTTTAAAACGAGGC GG TGTC
CTGCCCTTAAGGGCGGGCGTCCGGACGACTGTATCTGAGCCCCAGACTGCCCGAGTTTC
TGTCGAGGCTGCGAGGAAAGGCCCCTAGGCTGGGTCTGGTGCTTGGCGGCGGCTTCCT
CCCCGTTGTCTNTCCCCGGCCAGAGGCACCTCGGCTTCAGTCATGCTGAGCAGAGTATGGA
AGCACCTGACTACGAAGTGCTATCCGTGCGAGAACAGCTATTCCACGAGAGGATCCGCGAGT
GTATTATATCAACACTCTGTTGCAACACTGTACATCNTCTGCCACATCTTCC TGACCCGC
TTCAAGAAGCCTGCTGAGTTACCCACAGTGGATGATGAAGATGCCACCGTCAACAAGATTGC
GCTCGAGCTGTGCACCTTACCCCTGGCAATTGCCCTGGGTGCTGTCCTGCTCCTGCCCTCT
CCATCATCAGCAATGAGGTGCTGCACTCCC

FIGURE 82

GATGTGCTCCTGGAGCTGGTGTGCAGTGTCTGACTGTAAGATCAAGTCAAACCTGTTT
GGAATTGAGGAAACTTCTCTTTGATCTCAGCCCTGGTGGTCCAGGTCTTCATGCTGCTGT
GGGTGATATTACTGGTCCTGGCTCCTGTCAGTGGACAGTTGCAAGGACACCCAGGCCATT
ATTTCCAGCCTCCATGGACCACAGTCTCCAAGGAGAGAGTGACCCCTCACTTGCAA
GGGATTCGCTTCTACTCACCAAGAAAACAAAATGGTACCATCGGTACCTGGAAAGAAA
TACTAAGAGAAACCCAGACAATATCCTTGAGGTCAGGAATCTGGAGAGTACAGATGCCAG
GCCCAGGGCTCCCCTCTCAGTAGCCCTGTGCACTGGATTTCTCAGAGATGGGATTCC
TCATGCTGCCAGGCTAATGTTGAACTCCTGGCTCAAGTGATCTGCTCACTAGCCCTCTC
AAAGCGCTGGGATTACAGCTTCGCTGATCCTGCAAGCTCCACTTCTGTGTTGAAGGAGAC
TCTGTGGTTCTGAGGTGCCGGCAAAGGCGGAAGTAACACTGAATAACTATTACAAGAA
TGATAATGTCCTGGCATTCTTAATAAAAGAACTGACTTCAAAAAAAAAAAAAAAA

FIGURE 83

MLLWVILLVLAPVSGQFARTPRPIIFLQPPWTTVFQGERVLTCKGFRFYSPQTKWYHRYL
GKEILRETPDNILEVQESGEYRCQAQGPLSSPVHDFSSEMGFPHAAQANVELLGSSDLLT

FIGURE 84

CAGAAGAGGGGGCTAGCTAGCTGTCTCGGGACCAGGGAGACCCCCCGCGCCCCCGGTGT
GAGGC GG CCTCACAGGGCCGGTGGCTGGCGAGCCGACGCCGGCGGAGGAGGCTGTGAG
GAGTGTGTGGAACAGGACCCGGACAGAGGAACCATGGCTCCGCAGAACCTGAGCACCTTT
GCCTGTTGCTGCTATACCTCATCGGGCGGTGATTGCCGACGAGATTCTATAAGATCTTG
GGGGTGCCTCGAAGTGCCTCTATAAAGGATATTAAAAAGGCCTATAGGAAACTAGCCCTGCA
GCTTCATCCCACCGGAACCCCTGATGATCCACAAGCCCAGGAGAAATTCCAGGATCTGGGTG
CTGCTTATGAGGTTCTGTCAGATAGTGAGAACGAAACAGTACGATACTTATGGTGAAGAA
GGATTAAAAGATGGTCATCAGAGCTCCCATGGAGACATTTCACACTCTTTGGGATT
TGGTTTCA TGTGGAGGAACCCCTCGTCAGCAAGACAGAAATATTCCAAGAGGAAGT GATA
TTATTGTAGATCTAGAACGTCACTTGGAAAGAAGTATATGCAGGAAATTGTGGAAGTAGTT
AGAAACAAACCTGTGGCAAGGCAGGCTCTGGCAAACGGAAGTGCAATTGTCGGCAAGAGAT
GCGGACCACCCAGCTGGCCCTGGCGCTTCAAATGACCCAGGAGGTGGTCTGCGACGAAT
GCCCTAATGTCAAACACTAGTGAATGAAGAACGAAACGCTGGAAAGTAGAAATAGAGCCTGGGTG
AGAGACGGCATGGAGTACCCTTATTGGAGAAGGTGAGCCTCACGTGGATGGGAGCCTGG
AGATTACGGTCCGAATCAAAGTTGCAAGCACCAATATTGAAAGGAGAGGAGATGATT
TGTACACAAATGTGACAATCTCATTAGTTGAGTCACTGGTTGGCTTGAGATGGATATTACT
CACTTGGATGGTCACAAGGTACATATTCCCGGATAAGATCACCAAGGCCAGGAGCGAAGCT
ATGGAAGAAAGGGAAAGGGCTCCCAACTTGACAACAACAATATCAAGGGCTTTGATAA
TCACTTTGATGTGGATTTCAAAAGAACAGTTAACAGAGGAAGCGAGAGAAGGTATCAA
CAGCTACTGAAACAAGGGTCAGTGCAGAAGGTACAAATGGACTGCAAGGATATTGAGAGTG
AATAAAATTGGACTTTGTTAAAATAAGTGAATAAGCGATATTATTCTGCAAGGTTTT
TTGTGTGTGTTTGTGTTTATTTCATATGCAAGTTAGGCTTAATTGTTATCTAATGA
TCATCATGAAATGAATAAGAGGGCTTAAGAATTGTCATTGCATTGGAAAAGAACG
AGCAAAAGGTTACTAATACCTCCCTTGGGATTTAATGTCGGTGCTGCCGCTGAGT
TTCAAGAATTAAAGCTGCAAGAGGACTCCAGGAGCAAAAGAACACAATATAGAGGTTGGA
GTTGTTAGCAATTCAAAATGCCAAGTGGAGAAGTCTGTTTAAATACATTGTTG
TTATTTTA

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FIGURE 85

MAPQNLSTFCLLLYLIGAVIAGRDFYKILGVPRSASIKDIKKAYRKLALQLHPDRNPDDPQ
AQEKFQDLGAAYEVLSDEKRKQYDTYGE EGLKDGHQSSHGDIFSHFFGDFGMFGGTPRQQ
DRNIPRGSDIIVDLEVTLEEYAGNFVEVVRNKPVARQAPGKRKCNCRQEMRTTQLGPGRFQ
MTQEVVCDCECPNVKLVNEERTLEVEIEPGVRDGMEYPFIGECEPHVDGE PGDLRFRIKVVKH
PIFERRGDDLYTNVTISLVESLVGFE MDITHLDGHKVHISRDKITRPGAKLWKKGEGLPNFD
NNNIKGSLIITFDVDFPKEQLTEEAREGIKQLLKQGSVQKVYNGLQGY

FIGURE 86

TGGGACCAGGAACCCGGGCCCCCGGTGGAGNGCTAACAGGCCGGTGGNTGCGACCGAA
CGGGCGGGCGGAGGAGGTTTGAGGATTTGGAACAGGACCCGGACAGAGGAACCATGGTT
CCGCAGAACNTGAGCACNTTGCCTGTTGNTGNTATACTTCATCGGGCGGTGATTGCCGG
ACGAGATTTNTATAAGATTTGGGTGCCTNGAAGTGCCTNTATAAAGGATATTAAAAAGG
CCTATAGGAAACTAGCCCTGCAGNTTATCCGACCGAACCCCTGATGATCCACAAGCCCAG
GAGAAATTCCAGGATTGGGTGCTGCTTATGAGGTTNTGTCAGATAGTGAGAAACGGAAACA
GTACGATAATTATGGTGAAGAAGGATAAAAGATGGTNATCAGAGCTCCATGGAGACATTT
TTTCACACTNTTGGGGATTTGGTTCATGTTGGAGGAACCCCTNGTCAGCAAGACAGA
AATATTCCAAGAG

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FIGURE 87

GGCACGAGGCCGGCGGGCAGTCGCGGGATGCGCCGGAGCCACAGCCTGAGGCCCTCAGGT
CTCTGCAGGTGTCGTGGAGGAACCTAGCACCTGCCATCCTCTTCCCCAATTGCCACTCCA
GCAGCTTAGCCCAGGAGGATGTGACCGGGACTGAGTCAGGAGCCCTGGAAGCATGG
AGACTGTGGTATTGTTGCCATAGGTGTGCTGCCACCACCTTCTGGCTCGTTGCAGCC
TTGGTGCTGGTTGCAGGCAGCGCTACTGCCGGCGAGACCTGCTGCAGCGCTATGATT
TAAGCCCATTGTGGACCTCATTGGTGCATGGAGACCCAGTCTGAGCCCTGAGTTAGAAC
TGGACGATGTCGTTACCAACCCCCACATTGAGGCCATTCTGGAGAAATGAAGACTGGATC
GAAGATGCCTCGGGCTCATGTCCTACTGCATTGCCATCTGAAGATTGTCACACTCTGAC
AGAGAAGCTTGTGCCATGACAATGGGCTCTGGGCCAAGATGAAGACTTCAGCCAGTGTCA
GCGACATCATTGTGGTGGCCAAGCGGATCAGCCCCAGGGTGGATGATGTTGTGAAGTCGATG
TACCCCTCCGGTGGACCCAAACTCCTGGACGCACGGACGACTGCCCTGCTCCTGTCTGTCAG
TCACCTGGTGTGGTACAAGGAATGCCATCTGACGGAGGCCTGGACTGGATTGACC
AGTCTCTGTCGGCTGCTGAGGAGCATTGGAAGTCCTCGAGAACAGCCCTAGCTCTGAG
CCAGATAAAGGCCTCCAGGCCCTGAAGGCTCCTGCAGGAGCAGTCTGCAATTTAGTGCCT
ACAGGCCAGCAGCTAGCCATGAAGGCCCTGCCGCATCCCTGGATGGCTCAGCTTAGCCTT
CTACTTTCTATAGAGTTAGTTGCCTCTTGCAGTTGCAAACCTGTGGCTGGTGAAGT
TAAAGCAGGAGATCCCCGTCAAGTTATGCCTCTTGCAGTTGCAAACCTGTGGCTGGTGAAGT
GGCAGTCTAATACTACAGTTAGGGAGATGCCATTCACTCTGCAAGAGGAGTATTGAAAA
CTGGTGGACTGTCAGCTTATTTAGCTCACCTAGTGTGTTCAAGAAAATTGAGCCACCGTCT
AAGAAAATCAAGAGGTTCACATTAAATTAGAATTCTGGCCTCTCGATCGTCAGAATG
TGTGGCAATTCTGATCTGCATTTCAAGAAGAGGACAATCAATTGAAACTAAGTAGGGGTTTC
TTCTTTGGCAAGACTTGTACTCTCACCTGGCCTGTTCAATTATTGTATTATCTGCCT
GGTCCCTGAGCGTCTGGCTCTCCTCCCTTGCAAGGTTGGTTGAAGCTGAGGAAC
ACAAAGTTGATGATTCTTTATCTTATGCCTGCAATTACCTAGCTACCACTAGGTG
GATAGTAAATTATACTTATGTTCCCTAAAAAAAAAAAAAA

FIGURE 88

METVVIVAIIGVLATIFLASFAALVLVCRQRYCRPRDLLQRYDSKPIVDLIGAMETQSEPSEL
ELDDVVITNPHEAILENEDWIEDASGLMSHCIAILKICHTLTEKLVAMTMGSGAKMKTAS
VSDIIVVAKRISPRVDDVVKSMYPPLDPKLLDARTTALLSVSHLVLVTRNACHLTGGLDWI
DQSLSAEEHLEVLREAALASEPDKGPGPEGFLQEQSAI

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GCTTCATTCCTCCCGACTCAGCTCCCACCCCTGGGCTTCCGAGGTGCTTCGCCGCTGTCC
CCACCACTGCAGCCATGATCTCCTTAACGGACACGCAGAAAATTGGAATGGGATTAACAGGA
TTTGGAGTGTTTCTGTTCTTGAATGATTCTCTTTGACAAAGCACTACTGGCTAT
TGGAAATGTTTATTGTAGCCGGCTTGGCTTTGTAATTGGTTAGAAAGAACATTAGAT
TCTTCTTCAAAAACATAAAATGAAAGCTACAGGTTTTCTGGGTGGTGTATTGTAGTC
CTTATTGGTGGCCTTGATAGGCATGATCTCGAAATTATGGATTTCTCTGTTCAAG
GGGCTCTTCCTGTCGGTGTGCTTATTAGAAGAGTGCAGTCCTGGATCCCTCCTAAAT
TTACCTGGAATTAGATCATTGTAGATAAAAGTTGGAGAAAGCAACAATATGGTTAACACA
AGTGAATTGAAGACTCATTTAAATATTGTGTTATTATAAAAGTCATTGAAGAATATTCA
GCACAAAATTAAATTACATGAAATAGCTTGTAAATGTTCTTACAGGAGTTAAAACGTATAG
CCTACAAAGTACCAGCAGCAAATTAGCAAAGAAGCAGTGAAAACAGGCTTCACTCAAGTGA
ACTAAGAAGAAGTCAGCAAGCAAACGTGAGAGAGGTGAAATCCATGTTAATGATGCTTAAGAA
ACTCTGAAAGGCTATTGTGTTCTTCCACAATGTGCGAAACTCAGCCATCCTAGAGAA
CTGTGGTGCCTGTTCTTTATTGAAAGGCTCAGGAGCATCCATAGGCATTGCT
TTTAAAGTGTCCACTGCAATGGAAAAATATTCCAGTTGCACTGTATCTCTGGAAGTGA
TGCATGAATTGATTGGATTGTGTCATTAAAGTATTAAACCAAGGAAACCCAATTG
ATGTATGGATTACTTTTTGNGNCAGGGCC

FIGURE 90

MISLTDTQKIGMGLTGFVFFLFFGMLFFDKALLAIGNVLFVAGLAFVIGLERTFRFFFQK
HKMKATGFFLGGVFVVLIGWPLIGMIFEIYGFFLLFRGFFPVVGFIRRVPVLGSLLNLPGI
RSFVDKVGESNNMV

Important features:

Transmembrane domains:

amino acids 12-30 (typeII), 33-52, 69-89 and 93-109

N-myristoylation sites.

amino acids 11-16, 51-56 and 116-121

Aminoacyl-transfer RNA synthetases class-II protein.

amino acids 49-59

FIGURE 91

GAAGACGTGGCGGCTCGCCTGGCTTTCCCGGCTTCATTCTCCGACTCAGCTTCCC
ACCNTGGGCTTCCGAGGTGCTTCGCCGCTGTCCCCACCACTGCAGCCATGATCTCCTTAA
CGGACACGCAGAAAATGGAATGGGATTAACCGGATTGGAGTGTTTCTGTTCTTGGAA
ATGATTCTCTTTTGACAAAGCACTACTGGCTATTGGAAATGTTTATTGTAGCCGGCTT
GGCTTTGTAATTGGTTAGAAAGAACATTAGCTTCCAAAAACATAAAATGAAAG
CTACAGGTTTTCTGGTGGTATTGTAGTCCTATTGGTGGCCTTGATAGGCATG
ATCTCGAAATTATGGATTTCTCTGTTC

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FIGURE 92

GGCACGAGGCTGAACCCAGCCGGCTCCATCTCAGCTTCTGGTTCTAAGTCCATGTGCCAAA
GGCTGCCAGGAAGGAGACGCCTCCTGAGTCCTGGATCTTCTTCCTCTGGAAATCTTGAA
CTGTGGGTAGTTATTCTGAATAAGAGCGTCCACGCATCATGGACCTCGCGGGACTGC
TGAAGTCTCAGTCCTGTGCCACCTGGTCTTCTGCTACGTCTTATTGCCTCAGGGCTAAC
ATCAACACCATTCACTCAGCTCTTCACTCTCCTCTGGCCCATTAACAAGCAGCTTCCGAA
GATCAACTGCAGACTGCTATTGCATCTCAAGCCAGCTGGTATGCTGCTGGAGTGGTGGT
CGGGCACGGAATGCACCATTCAACGACCCGCGCGCCTACCTCAAGTATGGGAAGGAAAAT
GCCATCGTGGTCTCAACCACAAGTTGAAATTGACTTCTGTGTGGCTGGAGCCTGTCCGA
ACGCTTGGGCTGTTAGGGGCTCCAAGGTCTGGCAAGAAAGAGCTGGCCTATGTCCCAA
TTATCGGCTGGATGTGGTACTTCACCGAGATGGTCTTCTGTCGCGCAAGTGGGAGCAGGAT
CGCAAGACGGTTGCCACCAAGTTGCAGCACCTCCGGACTACCCGAGAAGTATTTTCC
GATTCACTGTGAGGGCACACGGTCACGGAGAAGAAGCATGAGATCAGCATGCAGGTGGCCC
GGCCAAGGGCTGCCTCGCCTAAGCATCACCTGTTGCCACGAACCAAGGGCTCGCCATC
ACCGTGAGGAGCTTGAGAAATGTAGTTCAGCTGTATATGACTGTACACTCAATTTCAGAAA
TAATGAAAATCCAACACTGCTGGAGTCCTAAACGAAAGAAATACCATGCAGATTGTATG
TTAGGAGGATCCCAGTGAAGACATCCCTGAAGACGATGACGAGTGCTCGGCCTGGCTGCAC
AAGCTCTACCAGGAGAAGGATGCCTTCAGGAGGAGTACTACAGGACGGCACCTCCAGA
GACGCCATGGTCCCCCGGCCCTGGACCTCGTGAACTGGCTTTGGCCTCGC
TGGTGCCTACCCCTTCTCCAGTTCTGGTCAGCATGATCAGGAGGGTCTCCCTGACG
CTGGCCAGCTCATCCTCGTCTTGTGGCCTCCGTGGAGTTGATGGATGATTGGTGT
GACGGAAATTGACAAGGGCTTGCCTACGGCAACTCTGACAGCAAGCAGAAACTGAATGACT
GACTCAGGGAGGTGTACCATCCGAAGGGAACCTGGGAACGGCTCTGCATATCCT
CCTTAGTGGACACGGTGACAAAGGCTGGTGAGCCCTGCTGGCACGGCGGAAGTCACGA
CCTCTCCAGCCAGGGAGTCTGGTCTCAAGGCCGGATGGGAGGAAGATTTGTAATCTT
TTTCCCCATGTGCTTGTGGCTTGGTTCTTGTGCGAGTGTGTGAGAATGGC
TGTGTGGTGAGTGTGAACCTTGTGATCATAGAAAGGTATTTAGGCTGCAGGGAG
GGCAGGGCTGGGACCGAAGGGACAAGTTCCCTTCATCCTTGGTGTGAGTTCTGT
AACCTTGGTTGCCAGAGATAAAAGTAAAAGTCTTAGGTGAGATGACTAAATTATGCCTC
CAAGAAAAAAATTAAAGTGTCTTCTGGTCAAAAAAA

FIGURE 93

MDLAGLLKSQFLCHLVFCYVFIASGLIINTIQLFTLLLWINKQLFRKINCRLSYCISSQLV
MLLEWWSGTECTIFTDPRAYLKYGKENAIVVLNHKEIDFLCGWSLSERFGLGGSKVLAKK
ELAYVPIIGWMWYFTEMVFCSRKWEQDRKTVATSLQHLRDYPEKYFFLIHCEGTRFTEKKHE
ISMQVARAKGLPRLKHLLPRTKGFAITVRSLRNVSAYDCTLNFRNNENPTLLGVNLNGKK
YHADLYVRRIPLEDIPEDDDECASWLHKLYQEKDAFQEYYRTGTFPETPMVPPRRPWTLVN
WLFWASLVLYPFFQFLVSMIRSGSSLTLASFILVFFVASVGVRWMIGVTEIDKGSAYGNSDS
KQKLND

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FIGURE 94

CTGAGGC GGCGGTAGC**ATGGAGGGGGAGAGTACGTCGGCGGTGCTCTCGGGCTTGTGCTCG**
GCGCACTCGCTTCCAGCACCTAACACGGACTCGGACACGGAAGGTTTCTTGGGGAA
GTAAAAGGTGAAGCCAAGAACAGCATTACTGATTCCAAATGGATGATGTTGAAGTTGTTA
TACAATTGACATTCAAGAAATATATTCCATGCTATCAGCTTTAGCTTTATAATTCTCAG
GCGAAGTAAATGAGCAAGCACTGAAGAAAATTATCAAATGTCAAAAAGAATGTGGTAGGT
TGGTACAAATTCCCGTCGTCATTAGCATGACGTTAGAGAGAGGCTGCTCACAA
AAACCTGCAGGAGCATTTCAAACCAAGACCTGTTCTGCTATTAACACCAAGTATAA
TAACAGAAAGCTGCTCTACTCATCGACTGGAACATTCTTATATAAACCTCAAAAAGGACTT
TTTCACAGGGTACCTTAGTGTTGCCAATCTGGCATGTCGAACAACACTGGTTATAAAC
TGTATCAGGTTCTGTATGTCCACTGGTTAGCCAGCAGTACAAACACACAGCTCTAAAT
TTTTGAAGAAGATGGATCCTAAAGGAGGTACATAAGATAATGAAATGTATGCTTCATTA
CAAGAGGAATTAAAGAGTATATGCAAAAAGTGGAAAGACAGTGAACAAGCAGTAGATAAACT
AGTAAAGGATGTAAACAGATTAAACGAGAAATTGAGAAAAGGAGAGGAGCACAGATTCAAG
CAGCAAGAGAGAAGAACATCCAAAAGACCTCAGGAGAACATTCTTGTCAAGGCATTA
CGGACCTTTTCAAATTCTGAATTCTCATTGATGTGTTATGTCTTAAAAAATAGACA
TGTTCTAAAGTAGCTGTAACTACAACCACCATCTGATGTAGTAGACAATCTGACCTAA
TGGTAGAACACACTGACATTCTGAAGCTAGTCCAGCTAGTACACCACAAATCTAAC
AAAGCCTTAGACTTAGATGACAGATGGCAATTCAAGAGATCTGGTTAGATACACAAGA
CAAACGATCTAAAGCAAATACTGGTAGTAGTAACCAAGATAAAGCATCCAAAATGAGCAGCC
CAGAAACAGATGAAGAAATTGAAAAGATGAAGGGTTTGGTGAATATTACGGCTCCTACA
TTTTGAT**CCTTTAACCTTACAAGGAGATTTTTATTTGGCTGATGGTAAAGCCAAACAT**
TTCTATTGTTTACTATGTTGAGCTACTGCACTGAGTAAGTTCATTGTTTACTATGTTCAC
CTGTTGCAGTAATAACACAGATAACTCTTAGTGCATTACTCACAAAGTACTTTCAAAC
ATCAGATGCTTTATTCCAAACCTTTTACCTTCACTAAGTTGTTGAGGGAAAGGCT
TACACAGACACATTCTTACAATTGGAAAAGTGGAGACCAGGCACAGTGGCTCACACCTGAA
TCCCAGCACTAGGGAAGACAAGTCAGGAGGATTGAAGCTAGGAGTTAGAGACCAGCC
TGGGCAACGTATTGAGACCAGTCTATTAAAAAATGGAAAAGCAAGAACAGCTTAT
TTTCAAAATATGGAAAGAAATTATGAAAATTATCTGAGTCATTAAATTCTCCTTAAG
TGATACTTTTAGAAGTACATTATGGCTAGAGTTGCCAGATAAAATGCTGGATATCATGCA
ATAAAATTGCAAAACATCATCTAAAATTAAAAAAAAAAAAAA

FIGURE 95

MEGESTSAVLSGFVLGALAFQHLNTSDTEGFLLGEVKGEAKNSITDSQMDDVEVVYTIDIQ
KYIPCYQLFSFYNSSGEVNEQALKKILSNVKKNVVGWYKFRRHSDQIMTFRERLLHKNLQE
FSNQDLVFLLTPSIITESCSTHRLEHSLYKPQKGLFHRVPLVVANLGMSEQLGYKTVSGSC
MSTGFSRAVQTHSSKFFEDGSLKEVHKINEMYASLQEELKSICKVEDSEQAVDKLVKDVN
RLKREIEKRRGAQIQAAREKNIQKDPQENIFLCQALRTFPNSEFLHSCVMSLKNRHVS
CNYNHHLDVVVDNLTLMEHTDIPEASPASTPQIIKKALDDLDRWQFKRSRLLDTQDKRSKA
NTGSSNQDKASKMSSPETDEEIEKMKGFEYSRSPTF

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FIGURE 96

GGCACAGCCGCGCGGGAGGGCAGAGTCAGCCGAGCCGAGTCCAGCCGGACGAGCGGACCA
 GCGCAGGGCAGCCCAAGCAGCGCGAGCGAACGCCGCCGCCACACCCTCTGCGGTCC
 CCGCGGCGCCTGCCACCCCTCCCTCCCTCCCGCGTCCCCGCCCTGCCGGCAGTCAGCTTG
 CGGGGTTCGCTGCCCGCGAAACCCCAGGGTACCAAGCCCAGCCCTTGCTTCCCTGGCCG
 CGGCCGCCTCCACGCCCTCCCTCTCCCTGGCCCGGCCCTGGCACCGGGACCGTTGCC
 GACGCGAGGCCAGCTACTTTCGCCCCCGTCTCCTCCGCCTGCTCGCCTCTCCACCA
 ACTCCAACCTCTCCCTCCAGCTCCACTCGTAGTCCCCACTCCGCAGCCCTGGCC
 GCTGCCGTAGGCCGCTTCCCGTCCGGTCCCAAAGGTGGAACCGTCCGCCGGCC
CCATGGCACGGTTGGCTGCCCGCTCTCTGCACCCCTGGCAGTGCTAGGCCCGCTG
 CTGGCTGCCGAGCTCAAGTCGAAAAGTTGCTCGGAAGTGCAGCTTACGTGTC
 CTTCAACAAGAACGATGCCCTCCACGAGATCAACGGTATCATTGAAGATCTG
 AGGTTCTACCTGCTCTCAAGAGATGGAGGAGAAGTACAGCCTGCAAAGTAAAGATGAT
 TTCAAAAGTGTGGTCAGCGAACAGTCAATTCAGCTTACAGCTTACGTTACGTTACAA
 GAAGTTGATGAATTCTCAAAGAACTACTTGAAAATGCAGAGAAATCCCTGAATGATATGT
 TTGTGAAGACATATGCCATTATACATGCAAATTCTGAGCTATTAAAGATCTTC
 GAGTTGAAACGTTACTACGTGGGGAAATGTGAACCTGAAAGAAATGCTAAATGACTTC
 GGCTCGCCTCTGGAGCGGATGTTCCGCCTGGTAACCTCCAGTACCAACTTACAGATGAGT
 ATCTGGAATGTGTGAGCAAGTATACGGAGCAGCTGAAGCCCTCGGAGATGTC
 TTGAAAGCTCCAGGTTACTCGTGTCTTGTAGCAGCCCGTACTTC
 TGCTCAAGGCTTAGCGGT
 TGCGGGAGATGTCGTGAGCAAGGTCTCCGTGTAACCCCCACAGCCAGTGTACCC
 TGTTGAAGATGATCTACTGCTCCACTGCCGGGTCTCGTGA
 TACTGCTCAAACATCATGAGAGGCTGTTGCCAACCAAGGGATCTG
 CAATTCTCATAGATGCTATGCTGATGGCAGAGAGGCTAGAGG
 CGTCATGGATCCCATCGATGTGAAGATTCTGATGCTATTATGA
 CAACATGCAGGATAATAGT
 GTCAAGTGTCTCAGAAGGTTCCAGGATGTGGACCCCCAAGCC
 AACGGGATCTGATTTGAATGGAA
 AATTCTCGTCCATCTCTGAAAGTGCCTCAGTGCTCGCTCAG
 ACCACATCCCCGAGG
 AACGCCAACACAGCAGCTGGCACTAGTTGGACCGACTGG
 TACTGATGTCAAGGAGAAA
 CTGAAACAGGCAAGAAATTCTGGCCTCCCTCCGAGCAAC
 GTTGCAACGATGAGGAT
 GGCTGCAGGAAACGGCAATGAGGATGACTGTTGGAAATGG
 AACAGGAAAAGCAGGTACCTGT
 TTGCAGTGCAGGAAATGGATTAGCAACCAGGG
 AACACCCAGAGG
 TCCAGGTTGACACC
 AGCAAAAC
 AGACATACTGATC
 CCTCGTCAAATCATGGCTCTCGAGTGTGATGAC
 GACCAGTGG
 GAGAGTGC
 CAATGAGAAAG
 GCGACAGTGT
 GCTGGAGG
 GACAAG
 GCGACAGTGT
 GCTGGTGT
 CCCTGGG
 CACA
 GGCCTACCTC
 CACTGTCTTCTGCATCTGTTCTGGTTATGCAGAGAG
 GAGATGGAGA
TAAT
 TCTCAA
 ACTCTGAGAAAAAGTGT
 CATCAAAAGT
 AAAAGG
 CACCA
 GTTATC
 ACTTTCTA
 CCATC
 CCTAGTGC
 ACTTTGCT
 TTTTAA
 ATGA
 ATGG
 AC
 ACA
 ATGT
 AC
 GTTT
 ACTATGT
 GGC
 CACTGG
 TTAAG
 AAGTGC
 ACTTTGTT
 CT
 CATTGAG
 GTGG
 CCTG
 CCCCC
 AAAC
 CATGTT
 AAC
 GCG
 TAAC
 ACTG
 TAGG
 TACAG
 AA
 CT
 ATAG
 GT
 GTG
 CATT
 GT
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 CAT
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 CTT
 ATT
 AAA
 AG
 CCC
 AAA
 AGC

FIGURE 97

MARFGLPALLCTLAVLSAALLAAELKSKSCSEVRRLYVSKGFNKNDAPLHEINGDHLKICPQ
GSTCCSQEMEEKYSLQSKDDFKSVVSEQCNHLQAVFASRYKKFDEFFKELLENAEKSLNDFM
VKTYGHLYMQNSELFKDLFVELKRYVVGNVNLEEMLNDFWARLLERMFRLVNSQYHFTDEY
LECVSKYTEQLPKPGDVPRKLKLQVTRAFVAARTFAQGLAVAGDVVSKVSVNPTAQCTHAL
LKMIYCSHCRLVTVKPCYNCSNIMRGCLANQGDLDFEWNNFIDAMLMVAERLEGPFNIES
VMDPIDVKISDAIMNMQDNSVQVSQKVFQGCGPPKPLPAGRISRSISESAFSARFRPHPEE
RPTTAAGTSLDRLVTDVKEKLKQAKKFWSLPSNCNDERMAAGNGNEDDCWNGKGKSRYLF
AVTGNGLANQGNNPEVQVDTSKPDILILRQIMALRVMTSKMKNAYNGNDVDFFDISDESSGE
GSGSGCEYQQCPSEFDYNATDHAGKSANEKADSAGVRPGAQAYLLTVFCILFLVMQREWR

FIGURE 98

CTCGCCCTCAAATGGGAACGCTGGCCTGGGACTAAAGCATAGACCACCAGGCTGAGTATCCT
GACCTGAGTCATCCCCAGGGATCAGGAGCCTCCAGCAGGGAACCTTCCATTATATTCTTCAA
GCAACTTACAGCTGCACCGACAGTTGCGATGAAAGTTCTAATCTCTTCCCTCCTGTG
TGCCACTAATGCTGATGTCCATGGTCTCTAGCAGCCTGAATCCAGGGTCGCCAGAGGCCAC
AGGGACCGAGGCCAGGCTCTAGGAGATGGCTCCAGGAAGGCGGCCAAGAATGTGAGTGC
AGATTGGTTCTGAGAGCCCCGAGAAGAAAATTCAATGACAGTGCTGGGCTGCCAAGAAC
AGTGCCCTGTGATCTTCAAGGGCAATGTGAAGAAAACAAGACACCAAAGGCACCACAGA
AAGCCAACAAGCATTCCAGAGCCTGCCAGCAATTCTCAAACAATGTCAGCTAAGAAC
TGCTCTGCCTTGTAGGAGCTCTGAGCGCCCACTCTTCCAATTAAACATTCTCAGCCAAGAA
GACAGTGAGCACACCTACCAGACACTCTTCTTCTCCACCTCACTCTCCACTGTACCCACC
CCTAAATCATTCCAGTGCTCTCAAAAGCATGTTTCAAGATCATTGTTGCTCTC
TCTAGTGCTCTTCTCGTCAGTCTAGCCTGTGCCCTCCCTAACCCAGGCTTAGGCTT
AATTACCTGAAAGATTCCAGGAAACTGTAGCTTCTAGCTAGTGTCATTAAACCTTAAATGC
AATCAGGAAAGTAGCAAACAGAAGTCAATAAATATTTAAATGTCAAAAAAAAAAAAAAA

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FIGURE 99

MKVLISLLLLPLMLMSMVSSSLNPGVARGHRDRGQASRRWLQEQQECECKDWFLRAPRR
KFMTVSGLPKKQCPCDHFKGKGNVKTRHQRHHRKPNKHSRACQQFLKQCQLRSFALPL

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FIGURE 100

AATGGC GTCTTAGTACTCGCCTGACAGTTGTCCCTGGGACTGCTTGCTTATTCTGACCT
GCTATGCAGACGACAAACCAGACAAGCCAGACGACAAGCCAGACGACTCGGGCAAAGACCCA
AAGCCAGACTCCCCAAATTCTAACGCCTCCTGGCACAGAGATCATGAGAATGCAGTCGA
GTTCATCCTCCGCTCCATGTCCAGGAGCACAGGATTATGGAATTGATGATAATGAAGGAA
AACATTCATGACATCCTCAGGACACACCCATGTGGCTCCTGGACAATCCAAGAGCA
GCCAAATCCTGCTTTCCAGTTGGCTCCACAAGTCCCTCCAGGACAGAGCCCTAAAGCAAC
TCCCAACGAGTTCTCAGGATTCAAGGCTCTGGCTTCAACAAACAGAACTCATTGAAACACC
CTGACTGCATTTGCTTTAGAAAGTTAGAATAAATGGCGCTTGGGATCACATAGTTG
ATGGAGAGGAAAAAAAAAAAAAAA

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FIGURE 101

MAVLVRLTVVLGLLVLFLTCYADDKPDKPDDKPDDSGKDPKPDFPKFLSLLGTEIIENAVE
FILRSMSRSTGFMEFDDNEGHSSK

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FIGURE 102

GGACGCCAGGCCCTGCAGAGGCTGAGCAGGGAAAAAGCCAGTGCCCCAGCGGAAGCACAGCT
CAGAGCTGGTCTGCCATGGACATCCTGGTCCCCTGCAGCTGCTGGTGTGCTGCTTAC
CCTGCCCTGCACCTCATGGCTCTGCTGGCTGCTGGCAGCCCTGTGCAAAAGCTACTTCC
CCTACCTGATGCCGTGCTGACTCCCAAGAGCAACCGCAAGATGGAGAGCAAGAACGGAG
CTCTTCAGCCAGATAAAGGGGCTTACAGGAGCCTCCGGAAAGTGGCCTACTGGAGCTGGG
CTGCCGAACCGGAGCCAACTTCAAGTTCTACCCACCGGCTGCAGGGTACCTGCCTAGACC
CAAATCCCCACTTGAGAAGTTCTGACAAAGAGCATGGCTGAGAACAGGCACCTCAATAT
GAGCGGTTGTGGTGGCTCCTGGAGAGGACATGAGACAGCTGGCTGATGGCTCCATGGATGT
GGTGGTCTGCACTCTGGTGTGCTGTGCAGAGCCAAGGAAGGTCTGCAGGAGGTCC
GGAGAGTACTGAGACCGGGAGGTGTGCTCTTTCTGGGAGCATGTGGCAGAACCATATGGA
AGCTGGCCTTCATGTGGCAGCAAGTTTCGAGCCACCTGAAACACATTGGGGATGGCTG
CTGCCTCACCAAGAGAGACCTGGAAGGATCTTGAGAACGCCAGTTCTCGAAATCCAAATGG
AACGACAGCCCCCTCCCTGAAGTGGTACCTGTTGGCCCCACATCATGGAAAGGCTGTC
AAACAATCTTCCAAGCTCCAAGGCACTCATTGCTCCTCCCCAGCCTCCAATTAGAAC
AGCCACCCACCAGCCTATCTATCTTCACTGAGAGGGACCTAGCAGAACATGAGAGAACATT
CATGTACCACCTACTAGTCCCTCTCTCCCAACCTCTGCCAGGGCAATCTAACTCAATC
CCGCCTTCGACAGTGAAAAGCTCTACTTCTACGCTGACCCAGGGAGAACACTAGGACCC
TGTTGTATCCTCAACTGCAAGTTCTGGACTAGTCTCCCAACGTTGCCTCCCAATGTTGTC
CCTTCCTCGTTCCATGGTAAAGCTCCTCTGCTTCCCTGAGGCTACACCCATGGGT
CTCTAGGAACCTGGTACAAAAGTCATGGTGCCTGCATCCCTGCCAGGCCCCCTGACCTCT
CTCCCCACTACCACCTCTTGAGCTGGGGCACCAGGGAGAACATGAGAGTGTGGGAT
GCCAGAGCAAGACTCAAAGAGGCAGAGGTTGTTCTCAAATATTTTAATAATAGACGA
AACCAACG

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FIGURE 103

MDILVPLLQLLVLLTLPLHLMALLGCWQPLCKSYFPYLMAVLTPKSNRKMESKKRELFSQI
KGLTGASGKVALLELGCCTGANFQFYPPGCRVTCLDPNPHFEKFLTKSMAENRHLQYERFVV
APGEDMRQLADGSMDVVVCTLVLCVQSPRKVLQEVRVLRPGVLFWEHVAEPYGSWAFM
WQQVFEPTWKHIGDGCCLTRETWKDLENAQFSEIQMERQPPPLKWLPGPHIMGKAVKQSFP
SSKALICSFPSLQLEQATHQPIYLPLRGT

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GTGGGATTATTCAGTGCAAGATCGTTCTCAGGGTGGAAAGTTGCCTCATCGCAGG
CAGATGTTGGGCTTGTCCAACAGCTCCCTGCCAGCTGTAGATAAGGGTTAAA
ACTAATATTTATGACAGAAGAAAAG**TG**TCAATTCCGTAAGTAAACATCATCATCTTGG
TCCTGGCTGCTCTCTTACTGGTTGCACCATAACTCCTCAGCTGAGCAGTTG
TTAAGGAATGAGGTTACAGATTAGGAATTGTAGGGCCTAACCTATAGACTTGTCCAAA
TGCTCTCCGACATGCAGTAGATGGGAGACAAGAGGAGATTCTGTGGTCATCGCTGCATCTG
AAGACAGGCTGGGGGCCATTGCAGCTATAAACAGCATTCAAGCACAAACACTCGCTCCAAT
GTGATTTCTACATTGTACTCTCAACAAATACAGCAGACCCTCCGGCTGGCTAACAG
TGATTCCCTGAAAAGCATCAGATAACAAATTGTCAATTGACCCCTAAACTTTGGAAGGAA
AAGTAAAGGAGGATCCTGACCAGGGGAATCCATGAAACCTTAACCTTGCAAGGTTCTAC
TTGCCAATTCTGGTCCCAGCGCAAAGAAGGCCATATACATGGATGATGATGTAATTGTGCA
AGGTGATATTCTGCCCTTACAATACAGCACTGAAGCCAGGACATGCAGCTGCATTTTAG
AAGATTGTGATTGCCTACTAAAGTTGTCACTCCGGAGCAGGAAACCAGTACAATTAC
ATTGGCTATCTGACTATAAAAGGAAAGAATTGTAAGCTTCCATGAAAGCCAGCACTTG
CTCATTAACTCTGGAGTTTGTCAAACCTGACGGATGGAAACGACAGAATATAACTA
ACCAACTGGAAAAATGGATGAAACTCAATGTAGAAGAGGGACTGTATAGCAGAACCTGGCT
GGTAGCATCACACACCCCTGCTTATCGTATTTATCAACAGCACTCTACCATCGATCC
TATGTGAATGTCCGCCACCTGGTCCAGTGTGGAAAACGATATTCACCTCAGTTGTA
AGGCTGCCAAGTTACTCCATTGGAATGGACATTGAAAGCCATGGGAAGGACTGCTTCATAT
ACTGATGTTGGAAAAATGGTATATTCCAGACCCAACAGGCAAATTCAACCTAATCCGAAG
ATATAACGAGATCTCAAACATAAAAG**TGAA**ACAGAATTGAACTGTAAGCAAGCATTCTCAG
GAAGTCCTGGAAGATAGCATGGAAAGTAACAGTTGCTAGGCTCAATGCCTATCGGT
GCAAGCCATGGAAAAAGATGTGTAGCTAGGTAAAGATGACAAACTGCCCTGCTGGCAGTC
AGCTTCCCAGACAGACTATAGACTATAAAATATGTCTCCATCTGCCTTACCAAGTGT
ACTACAATGCTGAATGACTGGAAAGAAGAACTGATATGGCTAGTCAGCTAGCTGGTACAGA
TAATTCAAAACTGCTGTTGGTTTAATTGTAACCTGTGGCCTGATCTGAAATAAAACTT
ACATTTC

108/310**FIGURE 105**

MSFRKVNI IILVLAVALFLLVLHHNFLSLSLLRNEVTDSGIVGPQPIDFVPNALRHAVDGR
QEEIPVIAASEDRGGAIAAINSIQHNTRSNVIFYIVTLNNNTADHLRSWLNSDSLKSIRYK
IVNFDPKLLEGKVKEPDQGESMKPLTFARFYLPILVPSAKKAIYMDDDVIVQGDILALYNT
ALKPGHAAAFSEDCDSASTKVVIRGAGNQNYIGYLDYKKERIRKLSMKASTCSFNPGVFVA
NLTEWKRQNITNQLEKWMKLNVEEGLYSRTLAGSITTPPLLIVFYQQHSTIDPMWNVRHLGS
SAGKRYSPQFVKAAKLLHWNGHLKPWGRTASYTDVWEKWYIPDPTGKFNLIRRYTEISNIK

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FIGURE 106

TGGTTTTGCCCATAAATTCCCTCAGCTTGAGCAGTTGTTAAGGAATGAGGTTACAGATT
CAGGAATTNTAGGN CCTCAACCTNTAGANTTGTCCAAATGTTCTCCGACATGCAGTAGAT
GGGAGACAAGAGGAGATT CCTGTGGTCATCGCTGCATNTGAAGACAGGCTGGGGGGCCAT
TGCAGCTATAAACAGCATT CAGCACAACACTCGNTCCAATGTGATTCTACATTGTTACTC
TCAACAATACAGCAGACCNTCCGGTCTGGNTCAACAGTGATTCCCTGAAAAGCATCAGA
TACAAAATTGTCATTTGACCTAAACTTTGGAAGGAAAAGTAAAGGAGGATCCTGACCA
GGGGAATCCATGAAACCTTAACCTTGCAAGGTTCTACTTGCCAATTCTGGTTCCCAGCG
CAAAGAAGGCCATATACATGGATGATGATGTAATTGCAAGGTGATATTCTGCCCTTAC
AATACAGCACTGAAGCCAGGACATGCAGCTGCATTTCAGAAGATTGTGATT CAGCCTCTAC
TAAAGTTGTCATCCGTGGAGCAGGAAA

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FIGURE 107

CGACGCTCTAGCGGTTACCGCTGCGGCCTGGCTGGCGTAGTGGGCTGCGCGCTGCCACG
GAGCTAGAGGGCAAGTGTGCTCGGCCAGCGTCAGGAAACGCAGGGCCAGACAACGGC
TGGGCTCCGGGCCTGCGCGCGCTGAGCTGGCAGGGCGGGTGGGGCGCGGGCTGCA
TCCGCATCTCCTCCATCGCCTGCAGTAAGGGCGGCCGAGCCTTGAGGGAAACGACT
TGTGGAGCCCTAACCAAGGGGTGTCTCTGAGCCTGGTGGATCCCCGGAGCGTCACATCACT
TTCCGATCACTCAAAGTGGTAAAAACTAATATTATATGACAGAAGAAAAGATGTCATT
CCGTAAGTAAACATCATCATCTTGGTCCTGGCTGTTGCTCTCTTACTGGTTTGCAC
CATAACTCCTCAGCTTGAGGCAGTTGTTAAGGAATGAGGTTACAGATTAGGAATTGAG
GGCCTCAACCTATAGGACTTTGTCCTGGCTGAGACAGGCTGGGGGCCATTGCAGCTATAA
ACAGCATTAGCACAAACACTCGCTCCAATGTGATTTCTACATTGTTACTCTCAACAATACA
GCAGACCATCTCCGGTCCTGGCTAACAGTGATTCCCTGAAAAGCATCAGATAACAAATTG
TCAATTGACCCCTAAACTTTGAAAGGAAAGTAAAGGAGGATCCTGACCAGGGGAATCC
ATGAAACCTTAACCTTGCAAGGTTCTACTTGCAATTCTGGTCCAGCGCAAAGAAGG
CCATATACATGGATGATGTAATTGTGCAAGGTGATATTCTGCCCTTACAATACAGCA
CTGAAGCCAGGACATGCAGCTGCATTTCAGAAGATTGTGATTGCAGCTCTACTAAAGTTGT
CATCCGTGGAGCAGGAAACCACTACAATTACATTGGCTATCTTGACTATAAAAGGAAAGAA
TTCGTAAGCTTCCATGAAAGCCAGCACTTGCTCATTAATCCTGGAGTTTGTGCAAAC
CTGACGGAATGGAAACGACAGAAATATAACTAACCAACTGGAAAATGGATGAAACTCAATGT
AGAAGAGGGACTGTATAGCAGAACCTGGCTGGTAGCATCACAAACACCTCTGCTTATCG
TATTTTATCAACAGCACTTACCATCGATCCTATGTGGAATGTCCGCCACCTGGTTCCAGT
GCTGGAAAACGATATTCACCTCAGTTGAAAGGCTGCCAAGTTACTCCATTGGAATGGACA
TTTGAAGCCATGGGAAGGACTGCTCATATACTGATGTTGGGAAAATGGTATATTCCA
GACCCAAACAGGCAAATTCAACCTAACCGAAGATATACCGAGATCTCAAACATAAAAGTAAA
CAGAATTGAACTGTAAGCAAGCATTCTCAGGAAGTCCTGGAAGATAGCATGCGTGGAAAG
TAACAGTTGCTAGGCTTCAATGCCATCGGTAGCAAGCCATGGAAAAGATGTGTCAGCTAG
GTAAAGATGACAAACTGCCGTCTGGCAGTCAGCTTCCCAGACAGACTATAGACTATAAAT
ATGTCCTCATGCCATTACCAAGTGTCTTACTACAATGCTGAATGACTGGAAAGAAGAA
CTGATATGGCTAGTTCAGCTAGCTGGTACAGATAATTCAAAACTGCTGTTGGTTAATT
GTAACCTGTGGCCTGATCTGAAATAAAACTACATTTCATAAGGAAAAAAAAAAAAAA
AAAAAA

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FIGURE 108

CTGCAGGTAGACATCTCCACTGCCAGGAATCACTGAGCGTGAGACAGCACAGCCTCCTCT
GAAGGCCGGCCATACCAGAGTCCTGCCTCGCATGGCCTCACCATTGAGGCAGCTCCACTG
TCTGTGCTGGTCTGAGGGTGCTGCCATGTCATGGGGCAGCCATCTCCCAGGGGCCCTCATC
GCCATCGTCTGCAACGGTCTCGTGGCTTCTGCTGCTGCTCTGGTCATCCTCTGCTG
GGCCTGCCATTCTCGTCTGCCGACGTTGACTCTCTGAATCCAGTCCAACTCCAGCCC
TGGCCCTGTCTGAGAAGGCCACCACCCAGAACGCCAGCCATGAAGGCAGCTACCTGC
TGCAGCCCTGAAGGCCCTGGCCTAGCCTGGAGCCCAGGACTAAGTCCACCTCACCTAGAG
CCTGGAATTAGGATCCCAGAGTTCAGCCAGCCTGGGTCCAGAACTCAAGAGTCCGCTGCT
TGGAGCTGGACCCAGCGGCCAGAGTCTAGCCAGCTGGCTCCAATAGGAGCTAGTGGCCC
TAAGGAGATGGCCTGGGTGGGGCTTATGAGTTGGTGCTAGAGCCAGGCCATCTGGACT
ATGCTCCATCCAAGGCCAAGGGTCAGGGCCGGTCCACTCTTCCCTAGGCTGAGCACC
TCTAGGCCCTCTAGGTTGGGAAGCAAACGGAAACCCATGGAATAATAGGAGGGTGTCCAG
GCTGGGCCCTCCCTGGCCTCCAGTGTGCTGGATAATAATGGAACATGGCTCTAA
AAAAAAAAAAAAAAA

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FIGURE 109

MGAAISQGALIAIVCNGLVGFLLLLWVILCWACHSRLPTLTLNPNPPTPALAPVLRRPHH
PRSPAMKAATCCSPEGPWPSLEPRT

FIGURE 110

GTTCAGATTCCCTCAACTATACCCACAGTCCAAAAGCAGACTCACTGTGTCCCAGGCTACCA
GTTCCCTCCAAGCAAGTCATTCCCTTATTAACCGATGTGTCCCTCAAACACCTGAGTGCTA
CTCCCTATTCGCATCTGTTGATAATGATGTTGACACCCCTCACCGAATTCTAAGTGGAA
TCATGTCGGGAAGAGATACAATCCTGGCCTGTGTATCCTCGCATTAGCCTGCTTGCC
ATGATGTTACCTTCAGATTCATCACCAACCCTCTGGTTCACATTTCATTCATTGGTTAT
TTTGGGATTGTTGTTGTCTGCGGTGTTATGGTGGCTGTATTATGACTATACCAACGACC
TCAGCATAGAATTGGACACAGAAAGGGAAAATATGAAGTGCCTGCTGGGTTGCTATCGTA
TCCACAGGCATCACGGCAGTGCTCGTCTTGATTTGTTCTCAGAAAGAGAATAAAATT
GACAGTTGAGCTTCCAATCACAAATAAGCCATCAGCAGTGCTCCCTCCTGCTGTTCC
AGCCACTGTGGACATTGCCATCCTCATTCTGGTCTCTGGGTGGCTGTGCTGCTG
AGCCTGGGAAC TG CAGGAGCTGCCAGGTTATGGAAGGCGGCCAAGTGGAAATATAAGCCCT
TTCGGGCATTGGTACATGTGGTGTACCTTAATTGGCCTCATCTGGACTAGTGAATTCA
TCCTTGCCTGCCAGCAAATGACTATAGCTGGGCAGTGGTTACTGTTATTCACAGAAAGT
AAAAATGATCCTCCTGATCATCCCACCTTCGTCTCTCCATTCTCTTCTTACCATCA
AGGAACCGTTGTGAAAGGGTCAATTAACTCTGTGGTGAGGATTCCGAGAACATTGTCA
TGTACATGCAAAACGCACTGAAAGAACAGCAGCATGGTGCATTGTCCAGGTACCTGTTCCGA
TGCTGCTACTGCTGTTCTGGTGTCTTGACAAATACCTGCTCCATCTCAACCAGAACATGCATA
TACTACAAC TG CT ATT AATGGACAGATTCTGTACATCAGCAAAGATGCATTCAAATCT
TGTCCAAGAAACTCAAGTCACTTACATCTATTAACTGCTTGGAGACTTCATAATTCTA
GGAAAGGTGTTAGTGGTGTGTTCACTGTTGGAGGACTCATGGCTTTAACTACAATCG
GGCATTCCAGGTGTGGCAGTCCCTCTGTTATTGGTAGCTTTGGCTACTTAGTGGCC
ATAGTTTTATCTGTGTTGAAACTGTGCTGGATGCACCTTCTGTGTTGCTGTTGAT
CTGGAAACAAATGATGGATCGTCAGAAAAGCCCTACTTATGGATCAAGAACATTCTGAGTT
CGTAAAAGGAGCAACAAATTAAACAATGCAAGGGCACAGCAGGACAAGCACTCATTAAGGA
ATGAGGAGGGAACAGAACACTCCAGGCCATTGTGAGATAGATACCCATTAGGTATCTGTACCT
GGAAAACATTCCCTCTAAGAGCCATTACAGAATAGAAGATGAGACCACTAGAGAAAAGTT
AGTGAATTTTTTAAAGACCTAATAAACCTATTCTCCTCAAAA

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FIGURE 111

MSGRTTILGLCILALALSLAMMFTFRFITTLLVHIFISLVLGLLFVCGLVWWLYDYTN
SIELDTERENMKCVLGFAIVSTGITAVLLVLIFVLRKRIKLTVELFQITNKA
ISSAPFLLFQPLWTFAILIFFWVLWVAVLLSLGTAGAAQVMEGGQVEYKPLSGIR
YMWSYHLIGLIWTSEFI
LACQQMTIAGAVVTCYFNRSKNNDPPDHPILSSLSILFFYHQGTVVKG
SFLISVVRIPRIIVM
YMQNALKEQQHGALSRYLFRCCYCCFWCLDKYLLH
LNQNAYTTAINGTDFCTS
AKDAFKIL
SKNSSHFTSINC
FGDFIIIFLGKV
LVVCFTVFGGLMAF
NYNRAFQV
WAVPLLVAFFAYLVAH
SFLSVFETVLDALFLCFAVDLETNDGSSEKPYFMDQEFLSFVKRSNKLNN
ARAQQDKHSLRN
EEGTELQAIVR

FIGURE 113

MRTVVLTMKASVIEMFLVLLVTGVHSNKETAKKIKRPKFTVPQINC DVKAGKIIDPEFIVKC
PAGCQDPKYH VY GTDVY ASYSSVC GAAV HSGVLDNSGGKILVRKVAGQSGYKG S Y SNGVQSL
SLPRWRESFIVLESKP KGV TYPSALTYSSSKSPAAQAGETTKAYQR PPIPGTTAQPVTLMQ
LLAVTVAVATPTTLP RPSA STTSIPR PQS VGHRSQEMDLWSTATYTSSQNR PRADPGI Q
RQDPSGAAFQKPVGADVSLGLVPKEELSTQSLEPVSLGDPNCKIDLSFLIDGSTSIGKRRFR
IQKQLLADVAQAL DIGPAGPLMGVVQYGDNPATHFNLKHTNSRDLKTAIEKITQRGGLSNV
GRAISFVTKNFFSKANGNRSGAPNVVVVMVDGWPTDKVEEASRLARESGINIFFITIEGAAE
NEKQYVVEPNFANKAVCRTNGFYSLHVQSWFGLHKT LQPLVKRVCDTDR LACSKTCLNSADI
GFVIDGSSSVGTGNFR TVLQFVTNLTK EFEISDT DTRIGAVQYTYEQRLEFGFDKYSSKPDI
LN A I K RVGYWSGGTSTGAA INF A LEQLFKKS KPNKR KLMILITDGRSYDDV RI PAMA AHLKG
VITYAIGVAWAQAEELEVIATHPARDHSFFVDEFDNLHQYVPRIIQNICTEFNSQPRN

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FIGURE 114

CAGGATGAACGGTGCAGTGGCTGCTGCTGCCGGGGCGCTGAGAGGACACGAGCTCTA
TGCCTTCGGCTGCTCATCCGCTCGGCCTCCTGCGCGCTGCCTCAGCACCATGGT
GCGCCAGGTCCCGACGGCTCCGCCAGATCCGCCACTACAGTTTCTGACTCTAAT
TGATGCACTGGACACCTGCTGATTTGGGAATGTCAGAATTCAAAGAGTGGTTGAAG
TGCTCCAGGACAGCGTGGACTTGATATTGATGTGAACGCCCTGTGTTGAAACAAACATT
CGAGTGGTAGGAGGACTCCTGCTGCTCATCTGCTCTCCAAGAAGGCTGGGTGGAAGTAGA
GGCTGGATGGCCCTGTTCCGGCCTCTCCTGAGAATGGCTGAGGAGGCCCGAAAACCTCC
TCCCAGCCTTCAGACCCCCACTGGCATGCCATATGGAACAGTGAACCTACTTCATGGCGTG
AACCCAGGAGAGACCCCTGTCACCTGTACGGCAGGGATTGGGACCTTCATTGTTGAATTGC
CACCTGAGCAGCCTCACTGGTACCCGGTGGTCAAGATGTGGCCAGAGTGGCTTGATGC
GCCTCTGGAGAGCCGGTCAGATATCGGGCTGGTGGCAACCACATTGATGTGCTCACTGGC
AAAGTGGTGGCCAGGACGCAGGCATCGGGCTGGCGTGGACTCCTACTTGAGTACTGGT
GAAAGGAGCCATCCTGTTCAAGATAAGAAGCTCATGCCATGTTCTAGAGTATAACAAAG
CCATCCGGAACTACACCCGCTTCGATGACTGGTACCTGTGGTTCAAGATGTACAAGGGACT
GTGTCCATGCCAGTCTTCAGTCCTGGAGGCCTACTGGCTGGTCTTCAGAGCCTCATGG
AGACATTGACAATGCCATGAGGACCTCCTCAACTACTACACTGTATGGAAGCAGTTGGG
GGCTCCCGGAATTCTACAACATTCTCAGGGATAACACAGTGGAGAAGCGAGAGGGCTACCCA
CTTCGGCCAGAACTTATTGAAAGCGCAATGTACCTCTACCGTGCACGGGGATCCACCC
CCTAGAACTCGGAAGAGATGCTGTGGAATCCATTGAAAAAAATCAGCAAGGTGGAGTGC
TTGCAACAATCAAAGATCTGCGAGACCACAAGCTGGACAACCGCATGGAGTCGTTCTC
GCCGAGACTGTGAAATACCTCTACCTCCTGTTGACCCAAACCAACTTCATCCACAACAA
GTCCACCTCGACGCGGTGATCACCCCTATGGGAGTGCATCCTGGGGCTGGGGGTACA
TCTTCAACACAGAAGCTCACCCATCGACCTGCCCTGCACGTGCCCCAGAGGCTGAAG
GAAGAGCAGTGGGAGGTGGAGGACTTGATGAGGAATTCTACTCTCTCAAACGGAGCAGGTC
GAAATTCAGAAAAACACTGTTAGTTGGGGCATGGAACCTCCAGCAAGGCCAGGAACAC
TCTTCTCACCAGAAAACATGACCAGGCAAGGGAGAGGAAGCCTGCCAAACAGAAGGT
CTTCTCAGCTGCCAGTCAGCCCTCACCTCAAAGTGGCATTACTGGACAGGTTTCT
AGACTCCTCATAACCACTGGATAATTTTTATTTTATTTTGAGGCTAAACTATAATA
AATTGCTTTGGCTATCATAAAA

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FIGURE 115

MPFRLLIPLGLLCALLPQHHGAPGPDGSAAPDAHYSFSLTLIDALDTLLILGNVSEFQRVVE
VLQDSVDFDIDVNASFETNIRVVGGLLSAHLLSKKAGVEVEAGWPCSGPLLMAEEAARKL
LPAFQTPTGMPYGTVNLLHGVNPGETPVTCTAGIGTFIVEFATLSSLTGDGVFEDVARVALM
RLWESRSDIGLVGNHIDVLTGKWVAQDAGIGAGVDSYFEYLVKGAILLQDKKLAMFLEYNK
AIRNYTRFDDWYLWVQMYKGTVSMPVFQSLEAYWPGLQSLIGDIDNAMRTFLNYYTVWKQFG
GLPEFYNIHQGYTVEKREGYPLRPELIESAMYLYRATGDPTLLELGRDAVESIEKISKVECG
FATIKDLRDHKLDNRMESFFLAETVKYLYLLFDPTNFIHNNGSTFDAVITPYGECILGAGGY
IFNTEAHPIDLAALHCCQRLKEEQWEVEDLMREFYSLKRSRSKFQKNTVSSGPWEPPARPGT
LFSPENHDQARERKPAKQKVPLLSCPSQPFTSKLALLGQVFLDSS

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FIGURE 116

AAAGTTACATTTCTGGAACTCTCCTAGGCCACTCCCTGCTGATGCAACATCTGGTTG
GGCAGAAAGGAGGGTGCTCGGAGCCGCCCTTCTGAGCTCCTGGCCGGCTAGAACAA
ATTCAGGCTCGCTGCACTCAGACCTCAGCTCAAACATATGCATTCTGAAGAAAGATGGCT
GAGATGGACAGAACATGCTTATTTGGAAAGAACAAATGTTCTAGGTCAAACGTGAGTCTACCA
AATGCAGACTTCACAATGGTTAGAAGAAATCTGGACAAGTCTTTCATGTGGTTTCT
ACGCATTGATTCCATGTTGCTCACAGATGAAGTGGCCATTCTGCCTGCCCTCAGAACCTC
TCTGTACTCTCAACCAACATGAAGCATCTTGTGATGTGGAGCCCAGTGATCGCGCCTGGAGA
AACAGTGTACTATTCTGTCGAATACCAGGGGAGTACGAGAGCCTGTACACGAGCCACATCT
GGATCCCCAGCAGCTGGTGCCTACTCACTGAAGGTCTGAGTGTGATGTCACTGATGACATC
ACGGCCACTGTGCCATACAACCTCGTGTGAGGGCACATTGGCTCACAGACCTCAGCCTG
GAGCATCCTGAAGCATCCCTTAATAGAAACTCAACCATCCTTACCCGACCTGGGATGGAGA
TCACCAAAGATGGCTTCCACCTGGTATTGAGCTGGAGGACCTGGGCCCCAGTTGAGTTC
CTTGTGGCCTACTGGAGGAGGGAGCCTGGTGCAGGAACATGTAAAATGGTGGAGGAGTGG
GGGTATTCCAGTGCACCTAGAAACCATGGAGCCAGGGCTGCATACTGTGTGAAGGCCCAGA
CATTGTGAAGGCCATTGGGAGGTACAGCGCCTTCAGCCAGACAGAAATGTGTGGAGGTGCAA
GGAGAGGCCATTCCCCTGGTACTGGCCCTGTTGCCTTGTGGCTTGTGCTGAGGCTGG
GGTGTGCCACTGTTCGTCTGGAAAATGGCCGGCTGCTCCAGTACTCCTGTTGCCCCGTGG
TGGTCTCCAGACACCTGAAAATAACCAATTCCCCAGAAGTTAACAGCTGAGAAGG
GAGGAGGTGGATGCCCTGTGCCACGGCTGTGATGTCTCTGAGGAACCTCCTCAGGGCTGGAT
CTC**TAG**GTTGCGGAAGGGCCAGGTGAAGCCAGAACCTGGTCTGCATGACATGGAAACC
ATGAGGGGACAAGTTGTTCTGTTTCCGCCACGGACAAGGGATGAGAGAAAGTAGGAAGA
GCCTGTTGCTACAAGTCTAGAACGAAACCATCAGAGGCAGGGTGGTTGTCTAACAGAACAC
TGACTGAGGCTTAGGGGATGTGACCTCTAGACTGGGGCTGCCACTTGCTGGCTGAGCAACC
CTGGGAAAAGTGACTTCATCCCTCGGTCTAACGTTCTCATCTGTAATGGGAAATTACC
TACACACCTGCTAAACACACACACACAGAGTCTCTCTATATACACACGTACACATAAA
TACACCCAGCACTGCAAGGCTAGAGGGAAACTGGTACACTCTACAGTCTGACTGATTCA
TGTTCTGGAGAGCAGGACATAATGTATGATGAGAATGATCAAGGACTCTACACACTGGGT
GGCTTGGAGAGCCCACCTTCCAGAATAATCCTTGAGAGAAAGGAATCATGGAGCAATGG
TGTTGAGTTCACTCAAGCCAATGCCGGTGCAGAGGGAAATGGCTTAGCGAGCTACAGT
AGGTGACCTGGAGGAAGGTACAGCCACACTGAAAATGGATGTGCATGAACACGGAGGATC
CATGAACACTGTAAAGTGTGACAGTGTGACACTGCAGACAGCAGGTGAAATGTATGT
GTGCAATGCGACGAGAACATGCAGAACAGTCAGTAACATGTGCATGTTGCTCCTTTTC
TGTTGGTAAAGTACAGAATTCAAGCAAATAAAAAGGCCACCTGGCCAAAAGCGGTAAAAAA
AAAAAAAAAA

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FIGURE 117

MQTFTMVLEEIWTSLFMWFFYALIPCLLTDEVAILPAPQNLSQLSTNMKHLLMWSPVIAPGE
TVYYSGEYESLYTSHIWIPSSWCSLTEGPECDVTDDITATVPYNLRVRATLGSQTSAW
SILKHPFNRNSTILTRPGMEITKDGFLVIELEDLGPGFEFLVAYWRREPGAEEHVKMVRSG
GIPVHLETMEPGAAYCVKAQTFVKAIGRYSAFSQTECVEVQGEAIPLVLAFAFGFMLILV
VVPLFWKMGRLLQYSCCPVVLPDTLKINTSPQKLISCRREEVDACATAVMSPEELLRAWIS

Important features:

Signal peptide:

amino acids 1-29

Transmembrane domain:

amino acids 230-255

N-glycosylation sites.

amino acids 40-43 and 134-137

Tissue factor proteins homology.

amino acids 92-119

Integrins alpha chain protein homology.

amino acids 232-262

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FIGURE 118

TCCTGCTGATGCACATCTGGTTGGCAAAAGGAGGTTGCTCGAGCCGCCCTTAGCTT
CCTGGCCGGCTCTAGAACATTAGGCTCGCTGCGACTAGACCTCAGCTCAAACATATGCA
TTCTGAAGAAAGATGGCTGAGATGACAGAATGCTTATTTGGAAAGAAACAATGTTCTAGG
TCAAACGTACTACCAAATGCAGACTTCAACATGGTTCTAGAAGAAATCTGGACAAGTCT
TTTCATGTGGTTTCTACGCATTGATTCCATGTTGCTCACAGATGAAGTGCCATTCTGC
CTGCCCTCAGAACCTCTGTACTCTCAACCAACATGAAGCATCTTGTGATGTGGAGCCA
GTGATCGCGCCTGGAGAAACAGTGTACTATTCTGTCGAATACCAGGGGAGTACGAGAGCCT
GTACACGAGCCACATCTGGATCCCCAGCAGCTGGTGTCACTCACTGAAGGTCTGAGTGTG
ATGTCACTGATGACATCACGGCCACTGTGCCATACAAACCTTGTGTCAAGGCCACATTGGC
TCACAGACCTCAGCCTGGAGCATCCTGAAGCATCCCTTAATAGAAACTCAACCATCCTTAC
CCGACCTGGGATGGAGATCACCAAAGATGGCTTNACCTGGTTATTGAGCTGGAGGACCTGG
GGCCCCAGTTGAGTTCTGTGGCCTANTGGAGGAGGGCGAACCCCTGCGCGCAAGGG
GTTNGCGAACCCCTTGCGGCCGCTGGGTATCTCTGAGAAAAGAGAGGCCAATATGACCCAC
ATACTCAATATGGACGAANTGCTATTGTCCACCTGTTGAGTGGCGCTGGTTGAT

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FIGURE 119

CGGACGCGTGGGCCACCTCCGAACAAGCCATGGTGGCGCGACGGTGGCAGCGCGTG
GCTGCTCCTGTGGCTCGGCCTCGCGCAGCAGGAGCAGGACTTCTACGACTTCAGGGCG
TCAACATCCGGGGCAAACACTGGTGTGCTGGAGAAGTACCGCGGATCGGTGTCCTGGTGGT
AATGTGGCCAGCGAGTGCAGCTTACAGACCAGCACTACCGAGCCCTGCAGCAGCTGCAGCG
AGACCTGGGCCCCCACCACTTAACGTGCTGCCTTCCCTGCAACCAGTTGGCCAACAGG
AGCCTGACAGCAACAAGGAGATTGAGAGCTTGCCCGCACCTACAGTGTCTCATTCCCC
ATGTTAGCAAGATTGCAGTCACCGGTACTGGTGCCCACCTGCCTCAAGTACCTGGCCA
GACTTCTGGAAAGGAGGCCACCTGGAACCTCTGGAAGTACCTAGTAGCCCCAGATGGAAAGG
TGGTAGGGCTTGGGACCCAACGTGTCACTGGAGGAGGTAGACCCCCAGATCACAGCGCTC
GTGAGGAAGCTCATCCTACTGAAGCGAGAAGACTTTAACCACCGCGTCTCCTCCACCA
CCTCATCCCACCTGTGTGGGCTGACCAATGCAAACCTAAATGGTGTCAAAGGGAG
AGACCCACTGACTCTCCTTACTCTTATGCCATTGGTCCCACATTCTGTGGGAA
AAATTCTAGTATTTGATTATTGAATCTTACAGCAACAAATAGGAACCTGGCCAATGAG
AGCTCTTGACCAAGTGAATCACCAAGCCGATAACGAAACGTCTGGCCAACAAAATGTGTGGCAA
TAGAAGTATATCAAGCAATAATCTCCACCAAGGCTCTGTAAACTGGACCAATGATTAC
CTCATAGGGCTGTTGTGAGGATTAGGATGAAATACCTGTGAAAGTGCCTAGGCAGTGCCAGC
CAAATAGGAGGCATTCAATGAACATTTCAGCCGATGATAATCCAGGCCAAAGGTTAGTT
GTTATTTCTGTATTATTTCTTCATTACAAAAGAAATGCAAGTCATTGTAACAATCCA
AACAAACCTCACGATATAAAATGAAAGTATCCTCCCTAAAAAA

*123 / 310***FIGURE 120**

MVAATVAAWLLLWAAACAAQQEQDFYDFKAVNIRGKLVSEKYRGSVSLVVNVASECGFTDQ
HYRALQQLQRDLGPHHFNVLAFCNCQFGQQEPDSNKEIESFARRTYSVSFPMFSKIAVTGTG
AHPAFKYLAQTSGKEPTWNFWKYLVAPDGKVVGAWDPTVSVEVRPQITALVRKLILLKREDL

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FIGURE 121

CGGACGCGTGGCGGGCGGGACGCAGGGCAAAGCGAGCC**ATG**GCTGTCTACGTGGGATGC
 TCGCCTGGGAGGCTGTGCGCCGGAGCTCGGGGTGCTGGGGGCCGGCCCTCTCT
 CGGAGTTGGCAGGAAGCCAGGTTGCAGGGTGTCCGCTTCAGTTCCAGAGAGGTGGATCG
 CATGGTCTCCACGCCATCGGAGGCCTCAGCTACGTTCAAGGGTGCACCAAAAGCATCTTA
 ACAGCAAGACTGTGGGCAGTGCTGGAGACCACAGCACAGAGGGTCCCAGAACGAGAGGCC
 TTGGTCGTCTCCATGAAGACGTCAAGTTGCCAAGTCAAGGAGGAGGTGGACAA
 AGCTGCTTCTGGCCTCCTGAGCATTGGCCTCTGCAAAGGTGACCGGCTGGCATGTGGGAC
 CTAACTCCTATGCATGGGTGCTCATGCAGTTGGCCACCGGCCAGGGCATCATTCTGGT
 TCTGTGAACCCAGCCTACCAAGGCTATGGAACGGTATGTCCTCAAGAACGGTGGCTGCAA
 GGCCCTTGTGTTCCCCAAGCAATTCAAGACCCAGCAATACTACAACGTCTGAAGCAGATCT
 GTCCAGAAGTGGAGAATGCCAGCCAGGGCCTGAAGAGTCAGAGGCTCCAGATCTGACC
 ACAGTCATCTCGGTGGATGCCCTTGCAGGGACCCCTGCTCTGGATGAAGTGGTGGCGGC
 TGGCAGCACACGGCAGCATTGACCGCTCCAATACAACCAGCAGTCCTGTGCCATG
 ACCCCATCAACATCCAGTTCACCTCGGGACAACAGGCAGCCCCAACGGGCCACCTCTCC
 CACTACAACATTGTCACAACTCAACATTAGGAGAGCGCCTGAAACTGCATGAGAAC
 ACCAGAGCAGTTGCGGATGATCCTGCCAACCCCTGTACCATTCGCTGGTTCCGTGGAG
 GCACAATGATGTTGATGTCAGGTGCCACCCCTCATCCTGCCCTCTCCATCTCAATGGC
 AAGAAGGCAGTGGAGGCCATCAGCAGAGAGAGAGGACACCTTCTGTATGGTACCCCCACGAT
 GTTCGTGGACATTCTGAACCAAGCCAGACTTCCAGTTGACATCTGACCATGTGTGGAG
 GTGTCATTGCTGGTCCCCCTGCACCTCCAGAGTTGATCCGAGCCATCATCAACAAGATAAAT
 ATGAAGGACCTGGTGGTTGCTTATGGAACCACAGAGAACAGTCCGTGACATTGCGCACTT
 CCCTGAGGACACTGTGGAGCAGAAGGCAGAAAGCGTGGCAGAATTATGCCCTCACACGGAGG
 CCCGGATCATGAACATGGAGGCAGGGACGCTGGCAAAGCTGAACACGCCGGGAGCTGTGC
 ATCCGAGGGTACTGCGTCATGCTGGCTACTGGGTGAGCCTCAGAACAGAGAGGAGCAGT
 GGATCAGGACAAGTGGTATTGGACAGGGAGATGTCGCCACAATGAATGAGCAGGGCTTGCA
 AGATCGTGGCCGCTCTAAGGATATGATCATCCGGGTGGTGAGAACATCTACCCCGCAGAG
 CTCGAGGACTTCTTCACACACACCCGAAGGTGCAGGAAGTGCAGGTGGTGGAGTGAAGGA
 CGATCGGATGGGAAAGAGATTGTCAGGCTGATTGGCTGAAGGAGGGAGGAGACACGG
 TGGAGGAGATAAAAGCTTCTGCAAAGGGAAAGATCTCACTTCAAGATTCCGAAGTACATC
 GTGTTGTCACAAACTACCCCTCACCATTCAAGGAAAGATCCAGAAATTCAAACCTCGAGA
 GCAGATGGAACGACATCTAAATCTG**TG**AATAAAGCAGCAGGCCGTGCTGGCCGGTTGGCTT
 GACTCTCTCTGTCAGAATGCAACCTGGCTTATGACACTAGATGTCCCCAGCACCCAGTTC
 TGAGCCAGGCACATCAAATGTCAAGGAATTGACTGAACGAACAGAGCTCTGGATGGTC
 CGGGAACTCGCCTGGCACAAGGTGCCAAAGGCAGGCAGCCTGCCAGGCCCTCCCTCCTG
 TCCATCCCCACATTCCCTGTCTGTCCTTGATTTGCATAAGAGCTTCTGTTTCTT
 GAAAAAAA

125/310**FIGURE 122**

MAVYVGMLRLGRLCAGSSGVLGARAALSRSWQEARLQGVRFLLSREVDRMVSTPIGGLSYVQ
GCTKKHLNSKTVGQCLETTAQRVPREALVVLHEDVRLTFAQLKEEVDKAASGLLSIGLCKG
DRLGMWGPNSYAWVLMQLATAQAGIILVSVNPAYQAMELEYVLKKVGCKALVFPKQFKTQQY
YNVLKQICPEVENAQPGALKSQRLPDLTAVISVDAPLPGTLLDEVVAAGSTRQHLDQLQYN
QQFLSCHDPINIQFTSGTGSPKGATLSHYNIVNNSNILGERLKLHEKTPEQLRMILPNPLY
HCLGSVAGTMMCLMYGATLILASPIFNGKKALEAISRERGTFLYGTPTMFVDILNQPDFSSY
DISTMCGGVIAGSPAPPELIRAIINKINMKDLVVAYGTTENSPVTFAHFPEDTVEQKAESVG
RIMPHTEARIMNMEAGTLAKLNTPGELCIRGYCVMLGYWGEPKTEEAVDQDKWYWTGDVAT
MNEQGFCKIVGRSKDMIIRGGENIYPAELEDFFHTHPKVQEJVQVVGVKDDRMGEECACIRL
KDGEETTVEEIKAFCKGKISHFKIPKYIVFVTNYPLTISGKIQKFKLREQMERHLNL

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FIGURE 123

CAACTCCAACATTTAGGAGAGCGCCTGAAACTGCATGAGAAGACACCAGAGCAGTTGCCGA
TGATCCTGCCAACCCCTGTACCATTGCCTGGGTTCCGTGGCAGGCACAATGATGTGTC
ATGTACGGTGCCACCCTCATCCTGGCCTCTCCATCTTCAATGGCAAGAAGGCAGTGGAGGC
CATCAGCAGAGAGAGAGGCACCTCCTGTATGGTACCCCCACGATGTTCGTGGACATTCTGA
ACCAGCCAGACTTCTCCAGTTATGACATCTGACCATGTGTGGAGGTGTCATTGCTGGTCC
CCTGCACCTCCAGAGTTGATCCGAGCCATCATCAACAAGATAAATATGAAGGACCTGGTGGT
TGCTTATGGAACCACAGAGAACAGTCCCGTGCACATTGCGCATTCCCTGAGGACACTGTGG
AGCAGAAGGCAGAAAGCGTGGCAGAATTATGCCTCACACGGAGGCAGGATCATGAACATG
GAGGCAGGGACGCTGGCAAAGCTGAACACGCCGGGAGCTGTGCATCCGAGGGTACTGCGT
CATGCTGGCTACTGGGTGAGCCTCAGAAGACAGAGGAAGCAGTGGATCAGGACAAGTGGT
ATTGGACAGGAGATGTCGCCAC

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FIGURE 124

GAGCAGGGACGGAGCCATGACCCCGCCAGGAAAGCAGGTGCCAGGCCATGATCTGGACTGC
AGGCTGGCTGCTGCTGCTCGCGAGGAGCGCAGGCCCTGGAGTGCTACAGCTGCG
TGCAGAAAGCAGATGACGGATGCTCCCCGAACAAGATGAAGACAGTGAAGTGCGCGCCGGC
GTGGACGTCTGCACCGAGGCCGTGGGGCGGTGGAGACCATCCACGGACAATTCTGCTGGC
AGTGCGGGTTCGGGTTCGGACTCCCCGGCAAGAATGACCGCGGCCTGGATCTCACGGC
TTCTGGCGTTCATCCAGCTGCAGCAATGCCTCAGGATCGCTGCAACGCCAACGCTAACCTC
ACCTCGCGGGCGCTCGACCCGGCAGGTAATGAGAGTGCAACCGCCAACGGCGTGGAGTG
CTACAGCTGTGGGCCTGAGCCGGAGGCCTGCCAGGGTACATCGCCGCCGTGAGCT
GCTACAAACGCCAGCGATCATGTCTACAAGGGCTGCTCGACGGCAACGTCACCTGACGGCA
GCTAATGTGACTGTGTCCTGCCTGTCCGGGCTGTGTCAGGATGAAATTCTGCACTCGGG
TGGAGTAACAGGCCAGGGTTACGCTCAGGGCTCTGTGCCCAGGGTCCGGCTGTAAC
CTGACACTCCGCAACAAGACCTACTTCTCCCTCGAACATCCCACCCCTTGCCGGCTGCCCC
CCAGAGCCCACGACTGTGGCCTCAACCACATCTGTCAACCAACTCTACCTCGGCCAGTGAG
ACCCACATCCACCAACCAAACCCATGCCAGCGCCAACCAGTCAGACTCCGAGACAGGGAGTAG
AACACGGAGGCCTCCGGATGAGGAGGCCAGGTTGACTGGAGGCCGCTGGCCACCAGGAC
CGCAGCAATTCAAGGGAGTATCCTGCAAAAGGGGGCCCGAGCAGCCCCATAATAAGGCTG
TGTGGCTCCCACAGCTGGATTGGCAGCCCTCTGTTGCCGTGGCTGCTGGTGTCTACTGT
GAGCTTCTCCACCTGGAAATTCCCTCTCACCTACTTCTCTGCCCTGGTACCCCTTTCT
CATCACTTCTGTTCCCACCACTGGACTGGCTGCCAGCCCTGTTTTCAACATTCCC
CAGTATCCCCAGCTCTGCTGCGCTGGTTGCGGCTTGGAAATAAAATACCGTTGTATAT
ATTCTGCCAGGGGTGTTCTAGCTTTGAGGACAGCTCTGTATCCTCTCATCCTTGTCTC
TCCGCTTGTCTCTGTGATGTTAGGACAGAGTGAGAGAAGTCAGCTGTCACGGGAAGGTG
AGAGAGAGGATGCTAAGCTTCTACTCACCTTCTCTAGCCAGCCTGGACTTGGAGCGTGG
GGTGGGTGGGACAATGGCTCCCCACTCTAACGCACTGCCTCCCTACTCCCCGATTTGG
GAATCGGTTCCCCATATGTCTTCTTACTAGACTGTGAGCTCCTCGAGGGGGGCCGGTAC
CCAATTGCCCTATAGTGAGTCGTA

*128/310***FIGURE 125**

MDPARKAGAQAMIWTAGWLLLLLRRGAQALECYSCVQKADDGCSPNKMKTVKCAPGVDVCT
EAVGAVETIHGQFSLAVRGCGSGLPGKNDRGLDHGLLAIFIQLQQCAQDRCNAKLNLTSRAL
DPAGNESAYPPNGVECYSCVGLSREACQGTSPPVSCYNASDHVYKGCFDGNVTLTAANVT
SLPVRCVQDEFCTRDTGVTGPGFTLSGSQCQGSRCNSDLRNKYFSPRIPLVRLPPPEPTT
VASTTSVTTSTSAPVRPTSTTKPMPAPTSQTPRQGVEHEASRDEEPRLTGGAAGHQDRSN
QYPAKGGPQQPHNKGCVAPTAGLAALLLAVAAGVLL

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FIGURE 126

CGGGACTCGGCGGGTCCCTGGAGTCTCGGAGGGACCGGCTGTGCAGACGCC**ATGG**AGT
TGGTGCTGGTCTTCCTCTGCAGCCTGCTGGCCCCATGGTCTGGCCAGTGCAGCTGAAAAG
GAGAAGGAAATGGACCCTTTATTGATTACCAGACCCTGAGGATTGGGGACTGGTGT
CGCTGTGGTCCCTCTCGGTTGGATCCTCCTTATCCTAAGTCGCAGGTGCAAGTGCAGTT
TCAATCAGAACGCCCCGGCCCCAGGAGATGAGGAAGCCCAGGTGGAGAACCTCATCACCGCC
AATGCAACAGAGCCCCAGAAGCAGAGAACTGAAGTGCAGCCATCAGTGGAAAGCCTCTGGAA
CCTGAGGCGGCTGCTGAACCTTGGATGCAAATGTCGATGCT**TAAGAAAACGGCCACTTC**
AGCAACAGCCCTTCCCAGGAGAACGCAAGAACATTGTGTGTCCCCCACCTATCCCCTCTA
ACACCATTCCCTCACCTGATGATGCAACTAACACTTGCCTCCCCACTGCAGCCTGCGGTCT
GCCACCTCCCGTGATGTGTGTGTGTGTGACTGTGTGTGTTGCTAACTGTG
GTCTTGTGGCTACTTGTGATGGTATTGTGTTGTTAGTGAACGTGGACTCGCTT
CCCAGGCAGGGCTGAGCCACATGCCATCTGCTCCTCCCTGCCCGTGGCCCTCCATCAC
CTTCTGCTCCTAGGAGGCTGTTGCCGAGACCAGCCCCCTCCCTGATTAGGGATGC
GTAGGGTAAGAGCACGGCAGTGGCTTCAGTCGTTGGACCTGGGAAGGTTGAGCAC
TTTGTCATCATTCTCATGGACTCCTTCACTCCTTAACAAAAACCTGCTCCTTATCCC
ACCTGATCCCAGTCTGAAGGTCTTAGCAACTGGAGATAAAAGCAAGGAGCTGGTAGCC
CAGCGTTGACGTAGGCAGGCTATGCCCTCCGTGTTAATTCTCCAGGGCTCCACG
AGGAGTCCCCATCTGCCCGCCCCCTCACAGAGGCCGGGATTCCAGGCCAGGGCTTCT
ACTCTGCCCTGGGAATGTGTCCCCTGCATATCTTCAGCAATAACTCCATGGCTCTGG
GACCTACCCCTCCAACCTCCCTGCTCTGAGACTCAATCTACAGCCCAGCTCATCCAG
ATGCAGACTACAGTCCCTGCAATTGGGTCTCTGGCAGGCAATAGTTGAAGGACTCCTGTTCC
GTTGGGCCAGCACACGGGATGGATGGAGGGAGAGCAGAGGCCTTGCTCTGCCTACG
TCCCTTAGATGGCAGCAGAGGCAACTCCGCATCCTTGCTCTGCCTGCGGTGGTCAGA
GCGGTGAGCGAGGTGGGTTGGAGACTCAGCAGGCTCCGTGCAGCCCTGGAACAGTGAGAG
GTTGAAGGTATAACGAGAGTGGGAACTCAACCCAGATCCGCCCTCCTGCTCTGTGTT
CCCGCGAAACCAACCAACCGTGCCTGTGACCCATTGCTTCTGTATCGTATCT
CCTCAACAACAACAGAAAAAGGAATAAAATCCTTGTTCCT

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FIGURE 127

MELVLVFLCSLLAPMVLASAAEKEKEMDPFHODYQTLRIGGLVFAVVLFSVGILLILSRCK
CSFNQKPRAPGDEEAQVENLITANATEPKQQRTEVQPSGGSLWNLRRLLEPLDANVDA

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FIGURE 128

AAACTTGACGCCATGAAGATCCCGGTCTTCCTGCCGTGGTGCTCTCCTCCCTCCTGGTGCT
CCACTCTGCCAGGGAGCCACCCTGGGTGGTCTGAGGAAGAAAGCACCAATTGAGAATTATG
CGTCACGACCCGAGGCCTTAACACCCCCTTCCTGAACATCGACAAATTGCGATCTGCGTTT
AAGGCTGATGAGTTCTGAACGGCACGCCCTTTGAGTCTATCAAAGGAAACTTCCTT
CCTCAACTGGGATGCCTTCCTAAGCTGAAAGGACTGAGGAGCGCAACTCCTGATGCCAGT
GACCATGACCTCCACTGGAAGAGGGGGTAGCGTGAGCGCTGATTCTAACCTACCATAACT
CTTCCTGCCTCAGGAACTCCAATAAACATTTCCATCCAAA

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FIGURE 129

MKIPVLPAVVLLSLLVLHSAQGATLGGPEEESTIENYASRPEAFNTPFLNIDKLRSAFKADE
FLNWHALFESIKRKLPFLNWDAFPKLKGLRSATPDAQ

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FIGURE 130

CAGTTCTGAAATCAATGGAGTTAATTAGGAAATACAAACCAGCC**ATGGGGTGGAGATTGC**
CTTGCCCTCAGTGATTCTCACCTGCCTCTCCCTTCTGGCAGCAGGAGTCTCCCAGGTTGTC
TTCTCCAGCCAGTCCAACTCAGGAGACAGGTCCAAGGCCATGGGAGATCTCTCCTGTGGC
TTTGCCGGCCACTC**ATGA**GAGTGTTTGTGTAAAGTATTTTAGAATACTGTTGACTTCT
TCATGATTTAATAACCATCCTTGCAGTTTATGAGGCTTAGGGGAATGTCAACCTCA
AATTTTGTTACTAGATGGCTCCATTACCCACCACTATTTAAGGTCCCTTATTTT
AGGTTCAAGGTTCATTGACTTGAGAAAGTGCCTCTGCAGCTCATTGATTTGTTATC
TTCACTATTAAATTGTAACGATTAAGAATAAGAGCACGCAGACCTCTAGGAGAATATT
TATCCCTGGGTGCCCTGACACATTATGTAGTGATCCCACAAATGTGATTGTTAATTAAA
TGTTATTCTAATATTAGTACATTCACTGAGTGTGATGTAATATGAATAACCAGAATCTATTCTT
AAAAGTTTGAGTATTTCAACTAGATATTGTATAGAAAGACTGAATAGTGATG

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FIGURE 131

MGVEIAFASVILTCLSLAAGVSQVLLQPVPTQETGPKAMGDLSCGFAGHS

FIGURE 132

GGGAAATCTGCAGTAGGTCTGCCGGCGATGGAGTGGTGGCTAGCTGCCGCTCGGCTCTG
GCTGCTGTTCTCCTGCCCTCAGCGCAGGGCCGCCAGAAGGAGTCAGGTTCAAAATGGA
AAGTATTATTGACCAAATTAACAGGTCTTGAGAATTACGAACCATGTTCAAGTCAAAAC
TGCAGCTGCTACCATGGTGTATAGAACAGGATCTAACCTCCGAGGAGGCATCTCCAG
GAAGATGATGGCAGAGGTAGTCAGACGGAAGCTAGGGACCCACTATCAGATCACTAAGAAC
GAATGTACCGGAAAATGACTGCATGTTCCCTCAAGGTGTAGTGGTGTGAGCAGCTTATT
TTGGAAGTGATCGGGCGTCTCCCTGACATGGAGATGGTGTCAATGTACGAGATTACCTCA
GGTTCCCTAAATGGATGGAGCCTGCCATCCCAGTCTTCCTCAGTAAGACATCAGAGTACC
ATGATATCATGTATCCTGCTTGACATTTGGAAAGGGGACCTGCTGTTGCCAATTAT
CCTACAGGTCTTGGACGGTGGACCTCTTCAGAGAACAGATCTGGTAAGGTCAAGCAGCTG
GCCATGGAAAAAGAAAAACTCTACAGCATATTCCGAGGATCAAGGACAAGTCCAGAACGAG
ATCCTCTCATTCCTGTCTCGAAAAACCCAAAATTGTTGATGCAGAACACCAAAAC
CAGGCCTGGAAATCTATGAAAGATACTTAGGAAAGCCAGCTGCTAAGGATGTCCATCTTGT
GGATCACTGCAAATACAAGTATCTGTTAATTTCGAGGCGTAGCTGCAAGTTCCGGTTA
AACACCTCTCCTGTGGCTCACTTGTGTTCCATGTTGATGAGTGGCTAGAATTCTTC
TATCCACAGCTGAAGCCATGGGTTCACTATATCCCAGTCAAAACAGATCTCTCCAATGTCCA
AGAGCTGTTACAATTGTAAGCAAATGATGATGATGAGCTCAAGAGATTGCTGAAAGGGAA
GCCAGTTATTAGGAACCATTGCAGATGGATGACATCACCTGTTACTGGAGAACCTCTTG
AGTGAATACTCTAAATTCTGTCTTATAATGTAACGAGAACGAAAGGTTATGATCAAATTAT
TCCCAAAATGTTGAAAACGAACTAGTAGTCATAGGACCATAGTCCTCTTGTGGCA
ACAGATCTCAGATATCCTACGGTGAGAACGCTTACCATAGCTGGCTCCTATACCTGAATA
TCTGCTATCAAGCCAAATACCTGGTTCTTCTTATCATGCTGCACCCAGAGCAACTCTTGAGA
AAGATTAAATGTGCTAATACACTGATATGAAGCAGTTCAACTTTGGATGAATAAGGA
CCAGAAATCGTGAGATGTGGATTGAAACCCAACTCTACCTTCAAGGAAATTGACTGTGCTTCA
ACAGCTTGTGCCTCAGATCATCCACCTGTGAGTCCATCACTGTGAAATTGACTGTGCTTCA
TGTGATGATGCCCTTGTCCCATTATTGGAGCAGAAAATTGTCATTGGAAGTAGTACAA
CTCATTGCTGGAATTGTGAAATTATTCAAGGCGTAGCTCTGTCACATTATTAAATGTAGG
AAACCCATGGGTTATGAAAAAAACTTGGGATCATTCTCTGAATGGCTAAGGAAGCGG
TAGCCATGCCATGCAATGATGTTAGGAGTCTCTTGTAAAACCATAAAACTCTGTTACTCAG
GAGGTTCTATAATGCCACATAGAAAGAGGCCATTGCATGAGTAATTATTGCAATTGGATT
TCAGGTTCCCTTTGTGCCTCATGCCCTACTTCTTAATGCCCTCTAAAGCCAAA

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FIGURE 133

MEWWASSPLRLWLLLFLPSAQGRQKESGSKWKVIDQINRSLENYEPCSSQNCSCYHGVIE
EDLTPFRGGISRKMMAEVVRRKLGHYQITKNRLYRENDCMFPSRCSGVEFILEVIGRLPD
MEMVINVRDYPQVPKWMEPAIPVFSFSKTSEYHDIMYPAWTFWEGGPAVWPIYPTGLGRWDL
FREDLVRSAAQWPWKKKNSTAYFRGSRTSPERDPLILLSRKNPKLVDAEYTKNQAWKSMKDT
LGKPAAKDVHLVDHCKYKYLNFNRGVAASFRFKHFLCGSLVFHVGDEWLEFFYPQLKPWVH
YIPVKTDLSNVQELLQFVKANDDVAQEIAERGSQFIRNHLQMDDITCYWENLLSEYSKFLSY
NVTRRKGYDQIIPKMLKTEL

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FIGURE 134

CACCCCTCCATTCTCGCCATGGCCCCTGCACTGCTCCTGATCCCTGCTGCCCTGCCTCTT
TCATCCTGGCCTTGGCACCGGAGTGGAGTTCGTGCCTTACCTCCCTCGGCCACTTCTT
GGAGGGATCCGGAGTCTGGTGGTCCGGATGCCGCCAGGGATGGCTGGCTGCCCTGCAGGA
CCGCAGCATTGCCCTGGCATGGATCTGGGCTCCTGCTTCTATTGTGGCAGC
ACAGCCTCATGGCAGCTGAAAGAGTGAAGGCATGGACATCCGGTACTTGGGTCTTCAG
AGGTCACTGTATGTGGCCTGCACTGCCCTGGCCTGCAGCTGGTATGCGGTACTGGAGCC
CATACCAAAGGCCCTGTGTTGGAGGCTGGGCTGAGCCATGGCCACCTGGTGCCGC
TCCTCTGCTTGTGCTCCATGTCATCTCCTGGCTCCTCATCTTAGCATCCTCTCGTCTT
GAATGCTGAGCTCATGGCCTCAAACAGGTATACTACCATGTGCTGGGCTGGCGAGCC
TCTGGCCTGAAGTCTCCCCGGCTCTCAGACTCTTCTCCCACCTGCCAACCGTGTG
TGGAGCTGCTGACAGTGCTGGTGCCTACCCGGCACGGACCCTGCCCTTGCT
TTCCTCTTACCCCTCACCTGGCCTGGCTCACGGGCTTGATCAGCAAGACCTCCGCTACCT
CGGGCCAGCTACAAAGAAAATCCACCTGCTCTCGGCCAGGATGGGAGGCAGAGT
GAGGAGCTCACTGGTACAAGCCCTGTTCTCCTCTCCACTGAATTCTAAATCCTTAAC
ATCCAGGCCCTGGCTGCTCATGCCAGAGGCCAAATCCATGGACTGAAGGAGATGCCCTT
CTACTACTTGAGACTTTATTCTCTGGTCCAGCTCCATACCCCTAAATTCTGAGTTCAAGCCA
CTGAACCTCAAGGTCCACTTCTCACCAAGGAAGAGTGGGTATGGAAGTCATCTGTCCC
TTCACTGTTAGAGCATGACACTCTCCCCCTAACAGCCTCTGAGAAGGAAAGGATCTGCC
CTGACCAACTCCCTGGCACTGTTACTTGCCCTGCGCTCAGGGTCCCTCTGCACCGCT
GGCTCCACTCCAAGAAGGTGGACCAGGGCTGCAAGTCAACGGTATAGCTGCTCCCTCCA
GGCCCAACCTGCCTCACCAACTCCGGCCCTAGTCTCTGCACCTCCTAGGCCCTGCCT
GGGCTCAGACCCAACCTAGTCAAGGGATTCTCCTGCTCTAACCGATGACTGGGCTC
CCTGCTCTCCCGAGGAAGATGCTCTGCAGGAAAATAAAAGTCAGCCTTTCTAAAAAAA

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FIGURE 135

MAPALLIIPAALASFILAFGTGVEFVRFTSLRPLLGGIPESGGPDARQGWLAALQDRSILAP
LAWDLGLLLLFGQHSLMAAERVKAWTSRYFGVLQRSLYVACTALALQLVMRYWEPIPKGPV
LWEARAEPWATWVPLLCFVLHVISWLLIFSILLVFDYAELMGLKQVYYHVLGLGEPLALKSP
RALRLFSHLRHPVCVELLTVLWVVPTLGDRLLLAFLLTLYLGLAHGLDQQDLRYLRAQLQR
KLHLLSRPQDGAE

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FIGURE 136

CCGAGCACAGGAGATTGCCTGCCTTAGGAGGTGGCTGCCTGTGGAAAAGCTATCAAGGA
AGAAATTGCCAACCATGTCTTTCTGTTTCAAGACTTCACACAGATCTGAGTGT
TTAATTAAGCATGGAATACAGAAAACAACAAAAACTTAAGCTTAATTCTGGAATT
CCACAGTTCTTAGCTCCCTGGACCCGGTTGACCTGTTGGCTCTCCGCTGGCTGCTCTA
TCACGTGGTGCTCTCGACTACTCACCCGAGTGTAAAGAACCTCGGCTCGGTGCTCTG
AGCTGCTGTGG**ATG**GCCTCGGCTCTGGACTGTCCTCCGAGTAGGATGTCAGTGAGATCC
CTCAAATGGAGCCTCCTGCTGCTCACTCCTGAGTTCTTGTGATGTGGTACCTCAGCCT
TCCCCACTACAATGTGATAGAACCGGTGAACTGGATGTACTTCTATGAGTATGAGCCGATT
ACAGACAAGACTTCACTCACACTCGAGAGCATTCAAACGCTCTCATCAAAATCCATT
CTGGTCATTCTGGTGACCTCCCACCCTCAGATGTGAAAGCCAGGCAGGCCATTAGAGTTAC
TTGGGGTGAAGGAAAGTCTGGTGGGGATATGAGGTTCTACATTCTTATTAGGCCAAG
AGGCTGAAAGGAAGACAAAATGTTGGCATTGTCCTTAGAGGATGAAACACCTTCTTATGGT
GACATAATCCGACAAGATTTCAGACACATATAATAACCTGACCTTGAAGGAAACATTATGGC
ATTCAAGGTGGGTAACTGAGTTTGCCCCAATGCCAAGTACGTAATGAAGACAGACACTGATG
TTTCATCAAACTGGCAATTAGTGAAGTATCTTTAAACCTAAACCACTCAGAGAAGTT
TTCACAGGTTATCCTCTAATTGATAATTATTCTCTAGAGGATTTACCAAAACCCATAT
TTCTTACCAAGGAGTATCCTCAAGGTGTTCCCTCCATACTGCACTGGGTTGGGTTATATAA
TGTCCAGAGATTGGTGCCAAGGATCTATGAAATGATGGGTACGTAAACCCATCAAGTT
GAAGATGTTATGTCGGATCTGTTGAATTATTAAAAGTGAACATTGATATTCCAGAAGA
CACAAATCTTCTTCTATATAGAATCCATTGGATGTCAGTCAACTGAGACGTGATTG
CAGCCCATGGCTTTCTCCAAGGAGATCATCACTTTGGCAGGTGATGCTAAGGAACACC
ACATGCCATTATT**AA**ACTTCACATTCTACAAAAGCCTAGAAGGACAGGATACCTGTGGAAA
GTGTTAAATAAAGTAGGTACTGTTGAAATTCAAGGAGGTGAGTGTGCTGGCTTACACTG
AACTGAAACTCATGAAAACCCAGACTGGAGACTGGAGGGTTACACTTGTGATTATTAGTC
AGGCCCTCAAAGATGATATGTGGAGGAATTAAATATAAGGAATTGGAGGTTTGCTAAA
GAAATTAAATAGGACCAAACAATTGGACATGTCATTGTAGACTAGAATTCTAAAAGGG
TGTTACTGAGTTAAAGCTCACTAGGCTGAAAAACAAACATGAGTGTGATTACCAATTAAAATATA
TGTAGTTCTGTCAAAAACTCTTCACTGAAAGTTACTGACAAACAAATTACCTGTTT
TGGTCATTATAAAAGTACTTCAAGATGTTGCACTGAGTATTACAGTTATTATTAAAATTA
CTTCAACTTGTGTTTAAATGTTTGACGATTCAATACAAGATAAAAGGATAGTGAAT
CATTCTTACATGCAAACATTCCAGTTACTGATCAGTTATTGATACATCAC
TCCATTAAATGTAAGTCAGGTGATTGCAATCAGTAATCTGGACTTGTAAAT
ATTTACTGTGTAATATAGAGAAGAATTAAAGCAAGAAACTGAAAA

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FIGURE 137

MASALWTVLPSRMSLRSLKWSLLLLSLLSFVVMWYLSLPHYNVIERVNWMYFYEYEPIYRQD
FHFTLREHSNC SHQNPF LVILVTSHPSDV KARQAI RV TWGEKK SWWGYEVLTFF LLGQEA EK
EDKMLALSLEDEHLLYGDII RQDFLDTYNNLTLKTIMAF RWVTEFC PNAKYVMKT DTDV FIN
TGNLVKYLLNLNHSEKFFTGYPLIDNYSYRGFYQKTHISYQEYPFKVFPPYCSGLGYIMSRD
LVPRIYEMMGHVKPIKFEDVYVGICLNLLKVNIHIPEDTNLFFLYRIHLDVCQLRRVIAAHG
FSSKEIITFWQVMLRNTTCHY

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CCTCTGTCCACTGCTTCGTGAAGACAAGATGAAGTTCACAAATTGTCTTGCTGGACTTCTT
GGAGTCTTCTAGCTCCTGCCCTAGCTAACTATAATATCAACGTCAATGATGACAACAACAA
TGCTGGAAGTGGCAGCAGTCAGTGAGTGTCAACAATGAACACAATGTGGCCAATGTTGACA
ATAACAACGGATGGGACTCCTGGAATTCCATCTGGGATTATGAAATGGCTTGCTGCAACC
AGACTCTTCAAAAGAACATGCATTGTGCACAAAATGAACAAGGAAGTCATGCCCTCCAT
TCAATCCCTTGATGCACTGGTCAAGGAAAAGAACGTTCAGGGTAAGGGACCAGGAGGACCAC
CTCCCAAGGGCCTGATGTACTCAGTCACCCAAACAAAGTCGATGACCTGAGCAAGTCGGA
AAAAACATTGCAAACATGTGTCGTGGATTCCAACATACATGGCTGAGGAGATGCAAGAGGC
AAGCCTGTTTTACTCAGGAACGTGCTACACGACCAGTGTACTATGGATTGGACATT
CCTTCTGTGGAGACACGGTGGAGAAACTAAACAATTAAAGCCACTATGGATTAGTCAT
CTGAATATGCTGTGCAGAAAAATATGGCTCCAGTGGTTTACCATGTCATTGAAATT
TTTCTCTACTAGTTATGTTGATTCTTAAGTTCAATAAAATCATTAGCATTGAAAAAAA

*142/310***FIGURE 139**

MKFTIVFAGLLGVFLAPALANYNINVNDDNNNAGSGQQSVVNNEHNVANVDNNNGWDSWNS
IWDYGNGFAATRLFQKKTCIVHKMNKEVMPSIQSLDALVKEKKLQGKGPGGPPPGLMYSVN
PNKVDDLSKFGKNIANMCRGIPTYMAEEMQEASLFFYSGTCYTTSVLWIVDISFCGDTVEN

143/310**FIGURE 140**

CATTCTGAAACTAATCGTGTAGAATTGACTTGAAAAGCATTGCTTTACAGAAGTATA
TTAACCTTTAGGAGTAATTCTAGTTGGATTGAAATATGAAATAATTAAAAGGGCTTCG
CTCATATATAGGAAAATCGCATATGGCCTAGTATTAAATTCTTATTGCTTACTGATTTTT
TGAGTTAAGAGTTGTTATATGCTAGAATATGAGGATGTGAATATAAATAAGAGAAGAAAAAA
GAATAAAAGTAGATTGAGTCTCCAATTTATGTAAGCTTCAGAAGAACTGGTTGTTACATG
CAAGCTTATAGTTGAAATATTTCAAGGAATTACATGAATGACAGTCTCGAACCAATGTGT
TTGTCGATTCACCAGAGACTATAGCATGTGCTGCATCTACCTGCAGCTAGAGCACTT
CAGATTCCGTTGCCAACCGTCCCCATTGGTTCTTCTTTGGTACTACAGAAGAGGAAAT
CCAGGAAATCTGCATAGAACACTTAGGCTTATACCAGAAAAAGCCAAACTATGAATTAC
TGGAAAAAGAAGTAGAAAAAGAAAAGTAGCCTTACAAGAAGCCAAATTAAAAGCAAAGGGA
TTGAATCCGGATGGAACCTCCAGCCTTCAACCCTGGTGGATTTCTCCAGCCTCCAAGCC
ATCATCACCAAGAGAAGTAAAAGCTGAAGAGAAATACCAATCTCCATTAAATGTGAAGACAG
TCAAAAAAAGAACCTGAGGATAGACAACAGGCTTCAAAAGCCCTACAATGGTGAAGAAAA
GACAGCAAGAGAAGTAGAAATAGCAGAAGTGCAGTCAGTCAGGTCAAGAACACGATCAG
TTCTAGATCACATACTCCAAGAAGACACTATAATAATAGCGGAGTCGATCTGGAACATACA
GCTCGAGATCAAGAACGCAGGTCCCGCAGTCACAGTGAAAGCCCTCGAACAGACATCATAATCAT
GGTTCTCCTCACCTTAAGGCCAACGCATACCAAGAGATGATTAAAAAGTCAACACAGACATGG
TCATAAAAGGAAAAAAATCTCGTTCTCGATCTCAGAGCAAGTCTCGGGATCACTCAGATGCAG
CCAAGAACACAGGCATGAAAGGGGACATCATAGGGACAGGGGTGAACGATCTCGCTCCTT
GAGAGGTCCCATAAAAGCAAGCACCAGGTGGCAGTCGCTCAGGACATGGCAGGCACAGGCG
CTGACTTCTCTTCTTGAGCCTGCATCAGTTCTGGTTGCCTATCTACAGTGTGATGT
ATGGACTCAATCAAAACATTAAACGCAAACGTGATTAGGATTGATTCTTGAAACCCCTCTA
GGTCTCTAGAACACTGAGGACAGTTCTTGAAAAGAAACTATGTTAATTGGCACATT
AAAATGCCCTAGCAGTCTAATTAAAAACATGGTCAGGTTCAATTGTACTTTATTATAGT
TGTGTATTGTTATTGCTATAAGAACTGGAGCGTGAATTCTGTAAAAATGTATCTTATT
ATACAGATAAAATTGCAGACACTGTTCTATTAAAGTGGTTATTGTTAAATGATGGTGAAT
ACTTCTTAACACTGGTTGTCTGCATGTGAAAGATTTCACAAGGAAATAAAACAAAT
CTTGTAAAAAGT

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FIGURE 141

MNDSLRTNVFVRFQPETIACACIYLAARALQIPLPTRPHWFLFGTTEEEIQEICIETLRLY
TRKKPNYELLEKEVEKRKVALQEAKLKAKGLNPDGTPALSTLGGFPASKPSSPREVKAEEK
SPISINVKTVKKEPEDRQQASKSPYNGVRKD SKRSRNSRSASRSRSRTSR SRSSHTPRRHYN
NRRSRSGTYSSRSRSRSHSESPRRHHNHGSPHLKAKHTRDDLKSSNRHGHKRKKSRSRSQ
SKSRDHSDAAKKHRHERGHHRDRRERSRSFERSHKSKHHGGSRGHGRHRR

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FIGURE 142

TGGGGATAAAGGAAAAATGGTCAGGTATTAATGGCTAAAGATTATTGGAAGGGGTTATCA
TTTTTGAAANNTATTGGGTACANAATTGNCTTGAAAAGCATTGCTTTACAGAAATATAT
TANCTTTTAGAGTAATTCTAGTTGGATTGTAATATGAAATTATTAAGGGCTTCGCT
CATATATAGGAAAATCGCATATGGCCTAGTATTAAATTNTTATTGCTACTGATTTTTG
AGTTAAGAGTTGTTATATGNTAGAATATGAGGATGTGAATATAAATAAGAGAAGAAAAAGA
ATAAAGTAGATTGAGTCTCCAATTATGTAAGCTTCAGAAGAACTGGTTGTTACATGCA
AGCTTATAGTTGAAATATTTTCAAGGAATTACATGAATGACAGTCTCGAACCAATGTGTT
GTTCGATTTCAACCAGAGANTATAGCATGTGCTGCATCTACCTGCAGNTAGAGCACTTCA
GATTCCGTTGCCAACTNGTCCCCATTGGTTCTCTTTGGTACTACAGAAGAGGAAATCC
AGGAAATNTGCATAGAAACACTTAGGCTTATACCAAGAAAAAGCCAAACTATGAATTACTG
AAAAAGAAGTAGAAAAAGAAAAGTAGCCTTACAAGAAGCCNAATTAAAGCAAAGGGATT
GAATCCGGATGGAACTCCAGCCTTCAACCCTGGTGGATTTCTCC

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FIGURE 143

GGCACGAGGCCTCGTCCAAGCTTGGCACGAGGGTGCACCGCGTTCTCGCACCGCGTCATGGC
GGTCCTCGGAGTACAGCTGGTGGTACCCCTGCTCACTGCCACCCCATGCACAGGCTGGCGC
CACACTGCTCCTCGCGCGCTGGCTGCTCTGTAACGGCAGTTGTTCCGATAACAAGCACCCG
TCTGAGGAGGAGCTTCGGGCCCTGGCGGGAAAGCCGAGGCCAGAGGCAGGAAAGAGCGGTG
GCCAATGGCCTTAGTGAGGAGAACCCACTGTCTGTGCCCGAGATGCCCGTTCCAGCTGG
AGACCTGCCCTCACGACCGTGGATGCCCTGGCCTGCGCTTCTCCTGGAGTACCAAGTGG
TTTGTGGACTTGCTGTACTCGGGCGCGTGTACCTCTCACAGAGGCCTACTACTACAT
GCTGGGACCAGCCAAGGAGACTAACATTGCTGTGTTCTGGTGCCTGCTCACGGTGACCTTCT
CCATCAAGATGTTCCCTGACAGTGACACGGCTGTACTTCAGCGCCGAGGAGGGGGTGAGCGC
TCTGTCTGCCTCACCTTGCCTCCTCTGCTGCTGGCCATGCTGGTGAAGTGGTGC
GGAGGAGACCCTCGAGCTGGCCTGGAGCCTGGCTGGCCAGCATGACCCAGAACCTAGAGC
CACTTCTGAAGAACGAGGGCTGGACTGGCGCTTCTGTGCCAAGCTGGCTATCCGCGTG
GGACTGGCAGTGGTGGCTCTGTGCTGGGTGCCTCCTCACCTTCCCAGGCCTGCGCTGGC
CCAGACCCACCGGGACGCACTGACCATGTCGGAGGACAGACCCATGCTGCAGTTCCCTGC
ACACCAGCTCCTGTCTCCCTGTTACCTGTGCTGGCTCTGGACAAAGCCCATTGCACGGGAC
TTCCTGCACCAGCCGCCCTGGTGGAGACGCGTTCTCCCTGCTGTCCGATTCTGCCTTCGA
CTCTGGCGCCTCTGGTGGCTGGTGGCTGTGCCTGCTGCCGCTGGCGGTGACCCGGCCCC
ACCTGCAGGCCTACCTGTGCTGCCAAGGCCCGGGTGGAGCAGCTGCGAAGGGAGGCTGGC
CGCATCGAAGCCCCTGAAATCCAGCAGAGGGTGGTCCGAGTCACTGCTATGTGACCGTG
GAGCTTGCACTGACGCCGCTCATCCTCACCCCTCAACTGCACACTCTGCTCAAGACGC
TGGGAGGCTATTCTGGGCCCTGGGCCAGCTCCTACTATCCCCGACCCATCCTCAGCC
AGCGCTGCCCATCGGCTCTGGGAGGACGAAGTCCAGCAGACTGCAGCGGGATTGCCGG
GGCCCTGGGTGGCCTGCTTACTCCCTCTGGCGTGCCTGGCCTACCTCATCTGGT
GGACGGCTGCCAGCTGCTGCCAGCCTTTCGGCCTCTACTCCACCAAGCACTGGCA
GGCTCCTAGCTGCCTGCAGACCCCTCTGGGCCAGAGGTCTGTTCTGGGCCAGCGGGACA
CTAGCCTGCCCTCTGTTGCGCCCCCGTGTCCCCAGCTGCAAGGTGGGCCGGACTCCCC
GGCGTCCCTCACCAAGTGCCTGACCCGCCCGGGCTGGACGCCAGTTCTGCCTCA
GAACGTCTCTCCTGGGCCAGCAGCATGAGGGTCCCGAGGCCATTGTCTCCGAAGCGTATG
TGCCAGGTTGAGTGGCGAGGGTGTGCTGGCTGCTCTGAACAAATAAGGAGCATGCC
GATTTTAA

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FIGURE 144

MAVLGVQLVVTLTATLMHRLAPHCSFARWLLCNGSLFRYKHPSEEELRALAGKPRPRGRKE
RWANGLSEEKPLSVPRDAPFQLETCPPLTVDALVLRFFLEYQWFVDFAVYSGGVYLFTTEAYY
YMLGPAKETNIAVFWCLLTVTFSIKMFLTVTRLYFSAEEGGERSVCLTF AFLFLLLAMLVQV
VREETLELGLEPGLASMTQNLEPLLKKQGWDWALPVAKLAIRVGLAVVGSVLGAFLT FPGLR
LAQTHRDALTMSEDRPMLQFLLHTSFLSPLFILWLWTKPIARDFLHQPPFGETRFSSLSDSA
FDSGRLWLLVVLCLLRLAVTRPHLQAYLCLAKARVEQLRREAGRIEAREIQQRVVRVYCYVT
VVSLQYLTPPLITLNCTLKLGGYSWGLGPAPLLSPDPSSASAAPIGSGEDEVQQTAARI
AGALGGLLTPLFLRGVLAYLIWWTAACQLLASLFGLYFHQHLAGS

FIGURE 145

CGTTNGCACGCGTCAATGGCGGTCTCGGAGTACAGCTGGTGGTACCCCTGCTCACTGCCAC
CCTCATGCACAGGCTGGCGCCACACTGCTCCTCGCGCGCTGGCTGCTCTGTAACGGCAGTT
TGTTCCGATAACAAGCACCCGTNTTGAGGAGGAGCTTCGGGCCTGGCGGGGAAGCCGAGGCC
CAGAGGCAGGAAAGAGCGGTGGCCAATGGCCTTAGTGAGGAGAACGCCACTGTCTGTGCC
GAGATGCCCGTTCCAGCTGGAGACCTGCCCTCACGACCGTGGATGCCCTGGCCTGCGC
TTCTTCCTGGAGTACCACTGGTTGTGGACTTGCTGTACTCGGGCGGTGTACCTCTT
CACAGAGGCCTACTACTACATGCTGGGACCAGCCAAGGAGACTAACATTGCTGTTCTGGT
GCCTGCTCACAGTGACCTCTCCATCAAGATGTTCTGACAGTGACACGGCTGTACTTCAGC
GCCGAGGAGGGGGGTGAGCGCTCTGTCTGCCTCACCTTGCCTCCTCTGCTGCTGGC
CATGCTGGTGCAAGCG

FIGURE 146

FIGURE 147

MKALLLLVLPWLSPANYIDNVGNLHFLYSELCKGASHYGLTKDRKRRSQDGCPDGCASLTAT
APSPEVSAATISLMTDEPGLDNPAYVSSAEDQPAISPVDGRSNRTRARPFERSTIRSRS
FKKINRALSVLRRTKSGSAVANHADQGRENSENTTAPEVFPRLYHLIPDGEITSIKINRVDP
SESLSIRLVGGSETPLVHIIIQHIYRDGVIARDGRLLPGDIILKVNGMDISNVPHNYAVRLL
RQPCQVLWLTVMREQKFRSRNNGQAPDAYRPRDDSFHVILNKSSPEEQLGIKLVRKVDEPGV
FIFNVLDGGVAYRHGQLEENDRVLAINGHDLRYGSPEAAHLIQASERRVHLVVSQRQVRQRS
PDIFQEAGWSNSGSWSPGPGERSNTPKPLHPTITCHEVNQKDPGESLGMTVAGGASHRE
WDLPIYVISVEPGVISRDGRIKTGDILLNDGVELTEVSREAVALLKRTSSIVLKALEV
KEYEPQEDCSSPAALDSNHNMAPPSDWSPSWVMWLELPRCLYNCKDIVLRRNTAGSLGFCIV
GGYEEYNGNKPFFIKSIVEGTPAYNDGRIRCGDILLAVNGRSTSGMIHACLRLLKELKGRI
TLTIVSWPGTFL

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FIGURE 148

CCAAAGTGATCATTGAAAAAGAGATATCCACATCTCAAGCCCATAAAGGATAGAAGCT
GCACAGGGCAGCTTACTTACTCCAGCACCTCCTCTCCCAGGCCAATG~~G~~TGCTGACCACATCT
TTGGGATACAATCTCATGGATACGAGGTTTAACATCATCAGCCCAAGCAACAATGGTGGC
AATGTTCAAGGAGACAGTGACAATTGATAATGAAAAAAATACGCCATCGTTAACATCCATGC
AGGATCATGCTCTTCTACCACAATTTGACTATAAACATGGCTACATTGCATCCAGGGTGC
TCTCCGAAGAGCCTGCTTATCCTGAAGATGGACCATCAGAACATCCCTCTGAACAAAT
CTCCAATGGTACATCTATGAGAACAGGCTCTGGACAAACATGTTCTCCAACAAATACACCTG
GGTCAAGTACAACCTCTGGAGTCTGTGATCAAAGACGTGGATTGGTTCTGCTGGTCAC
CCATTGAGAAACTCTGCAAACATATCCCTTGATAAGGGGAAGTGGTTGAAAACACACAT
AATGTCGGTGCTGGAGGCTGTGCAAAGGCTGGCTCTGGCATCTGGGAATTCAATCTG
TGCAGACATTGTTTAGGATGATTAGCCCTCTTGTATCTTTCAAAGAAATACATCC
TTGGTTACACTCAAAGTCAAATTAAATTCTTCCAATGCCCAACTAATTGAGATT
AGTCAGAAAATATAATGCTGTATTATA

FIGURE 149

MKILVAFLVVLTI~~FGI~~QSHGYEVFNIISPSNNGGNVQETVTIDNEKNTAIVNIHAGSCSSTT
IFDYKHGYIASRVL~~SRRAC~~FILKMDHQNI~~PPLNNL~~QWYIYEKQALDNMFSNKYT~~WVKYN~~PLE
SLIKDWDW~~FLLG~~SPIEKLCKHIPLYKGEVVENTHNVGAGGCAKAGLLGILGISICADIHV

FIGURE 150

GGCACGAGCCAGGAACTAGGAGGTTCTCACTGCCCGAGCAGAGGCCCTACACCCACCGAGGC
ATGGGGCTCCCTGGCTGTTCTGCTTGGCCGTGCTGGCTGCCAGCAGCTTCTCCAAGGCACG
GGAGGAAGAAATTACCCCTGTGGTCTCCATTGCCTACAAAGTCCTGGAAGTTTCCCCAAAG
GCCGCTGGGTGCTCATAACCTGCTGTGCACCCCAGCCACCACGCCATCACCTATTCCCTC
TGTGGAACCAAGAACATCAAGGTGCCAAGAACAGGTGGTAAGAGACCCACGAGCCGGCTCCTT
CAACCTCAACGTACACTCAAGTCCAGTCCAGACCTGCTCACCTACTTCTGCCGGCGTCCT
CCACCTCAGGTGCCATGTGGACAGTGCCAGGCTACAGATGCACTGGGAGCTGTGGTCCAAG
CCAGTGTCTGAGCTGCCGGCCAACTTCACTCTGCAGGACAGAGGGGAGGCCAGGGTGG
GATGATCTGCCAGGCCTCGGGCAGCCCACCTATACCAAACAGCCTGATGGGAAGGATG
GGCAGGGTCCACCTGCAGCAGAGACCATGCCACAGGCAGCCTGCCAACTTCTCCTCCTGCCG
AGCCAGACATCGGACTGGTTCTGGTGCCAGGCTGCAAACACAAGCCAATGTCCAGCACAGCGC
CCTCACAGTGGTGCCCCCAGGTGGTGACCAGAAGATGGAGGACTGGCAGGGTCCCTGGAGA
GCCCATCCTTGCCTGCCGCTCTACAGGAGCACCCGCCGTCTGAGTGAAGAGGGAGTTGG
GGGTTCAAGGATAGGAATGGGGAGGTCAAGAGCACGCAAAGCAGCAGCCATGTAGAATGAACC
GTCCAGAGAGCCAAGCACGGCAGAGGACTGCAGGCCATCAGCGTGCAGTGGTCTGATTTGGA
GTTCATGCAAAATGAGTGTGTTAGCTGCCACAAAAAAAAAAAAAAA

FIGURE 151

MGLPGLFCLAVLAASSFSKAREEEITPVVSIAVKLEVFPKGRLVLTCCAPQPPPPITYSL
CGTKNIKVAKVVKTHEPASFNLNVTLKSSPDLLTYFCRASSTSGAHVDSARLQMHWELWSK
PVSELRANFTLQDRGAGPRVEMICQASSGSPPITNSLIGKDQVHLQQRPCHRQPANFSFLP
SQTSDWFWCQAANNANVQHSALTVVPPGGDQKMEDWQGPLESPILALPLYRSTRRLSEEEFG
GFRIGNGEVRGRKAAAM

FIGURE 152

GGTCCTTAATGGCAGCAGCCGCCGCTACCAAGATCCTTCTGTGCCTCCGCTTGCTCCTG
CTGTCCGGCTGGTCCCAGGGCTGGCGAGCCGACCCCTCACTCTCTTGCTATGACATCACCGT
CATCCCTAAGTTAGACCTGGACCACGGTGGTGCCTCAAGGCCAGGTGGATGAAAAGA
CTTTCTTCACTATGACTGTGGCAACAAGACAGTCACACCTGTCAGTCCCCTGGGAAGAAA
CTAAATGTCACAACGGCCTGGAAAGCACAGAACCCAGTACTGAGAGAGGTGGACATACT
TACAGAGCAACTGCGTGACATTAGCTGGAGAATTACACACCCAAGGAACCCCTCACCTGC
AGGCAAGGATGTCTTGAGCAGAAAGCTGAAGGACACAGCAGTGGATCTTGGCAGTCAGT
TTCGATGGCAGATCTTCCTCCTTTGACTCAGAGAAGAGAATGTGGACAACGGTTCATCC
TGGAGCCAGAAAGATGAAAGAAAAGTGGGAGAATGACAAGGTTGTGGCATGTCCTTCATT
ACTTCTCAATGGGAGACTGTATAGGATGGCTTGAGGACTTCTGATGGCATGGACAGCACC
CTGGAGCCAAGTGCAGGAGCACCACCGCCATGTCCTCAGGCACAACCCAACTCAGGGCCAC
AGCCACCACCCATCCTTGCTGCCCTCATCATCCTCCCTGCTTCATCCTCCCTGGCA
TCTGAGGAGAGTCCTTAGAGTGACAGGTTAAAGCTGATACCAAAAGGCTCTGTGAGCAG
GTCTTGATCAAACCTGCCCTCTGTCTGCCAGCTGCCACGACCTACGGTGTATGTCCAGT
GGCCTCCAGCAGATCATGATGACATCATGGACCCAATAGCTCATTCACTGCCTGATTCTT
TTGCCAACAAATTACCAAGCAGTTACCTAACATATTATGCAATTCTCTTGGTGTACCC
TGATGGAATTCTGCACTTAAAGTTCTGGCTGACTAAACAAGATATATCATTCTTCTTC
TCTTTTGTTGGAAAATCAAGTACTTCTTGATGATGATCTCTTGCAAAATGATATT
GTCAGTAAATAATCACGTTAGACTTCAGACCTCTGGGATTCTTCCGTGTGAAAGAG
AATTTTAAATTATTAATAAGAAAAAATTATATTAAATGATTGTTCTTAGTAATTAT
TGTTCTGTACTGATATTAAATAAGAGTTCTATTCCCCAAAAAAAAAAAAAA

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FIGURE 153

MAAAAATKILLCLPLLLLGGWSRAGRDPHSLCYDITVIPKFRPGPRWCAVQQVDEKTF
HYDCGNKTVTVPVSPLGKKLNVTAWKAQNPVLREVVDILTEQLRDIQLENYTPKEPLTLQAR
MSCEQKAEGHSSGSWQFSFDGQIFLLFDSEKRMWTTVHPGARKMKEKWENDKVAMSFHYS
MGDCIGWLEDFLMGMDSTLEPSAGAPLAMSSGTTQLRATATTLILCCLLIILPCFILPGI

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FIGURE 154

GGGAAAGCCATTCGAAAACCCATCTATAACAAACTATATTTTCAATTCTGCTGCTAGCTG
CCTTGGGCCTCACAAATTTCATTCTGTTTCTGACTTCAGTTATACCGTGG**A**TGGAG
TTGATCCCAACCATAACATCGTGGAGGGTTAATTGGTAGCCCTACCCAATTCTG
GTGTGGCTTCTTGAGAGGATTCCACCTCAAAATCATGAACCTGGCTGTTGATCAAAA
GAGAATTGGATTCTACTCTAAAAGTCATAGGACTGGCAAAAGAAGCTAGCAGAAC
TCAACCTGGCCTCCCATAAACAGGACAGATTTCAGGTGATGGCAAAATGGATTCTACAT
CAACGGAGGCTATGAAAGCCATGAACAGATTCCAAAAAGAAAACCAAATTGGGAGGCCAAC
CCACAGAACAGCATTCTGGGCCAGGCTG**TAA**TCAGAATTGTCGTCGTACATGCTAACAGC
ATTGCTTTTCCCCAAAATTAAACACATTGGAGAAGTGATGATACTCTCCCTTACCTT
CCTCTCTCCATTCAAGCATTCAAAGTATATTTCATGAATTAAACCTTGCAGCAAGGGACC
TTAGATAGGCTTATTCTGACTGTATGCTTACCAATGAGAGAAAAAAATGCATTCCGTAT
CATCCTTTCAATAAACTGTATTCAATTGGAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 155

MELIPTITSWRVLILVVALTQFWCGFLCRGFHLQNHELWLLIKREFGFYSKSQYRTWQKKLA
EDSTWPPINRTDYSGDGKNGFYINGGYESHEQIPKRKLKGQQPTEQHFWARL

FIGURE 156

GTTCTCCTTCCGAGCAAAATCCCAGGCATGGTGAATTATGAACGTGCCACACCATGAAG
CTCTTGCGAGGTAAGTGCACCAACACCTGGATGCCATCCTGCTCCCGTCGTCTA
CCTCACGGCGCAAGTGTGGATTCTGTGTGCAGCCATCGCTGCTGCCGCTCAGCCGGCCCC
AGAACTGCCCTCGTTGCTCGTGCAGTAACCAGTCAGCAAGGTGGTGTGACCGCCGG
GGCCTCTCGAGGTCCCGAGGGTATTCCCTCGAACACCCGGTACCTCAACCTCATGGAGAA
CAACATCCAGATGATCCAGGCCACACCTCCGCCACCTCCACCACCTGGAGGTCTGCAGT
TGGGCAGGAACCTCCATCCGGCAGATTGAGGTGGGGCCTCAACGGCCTGGCCAGCCTCAAC
ACCCTGGAGCTGTTGACAACGGCTGACAGTCATCCCTAGGGGGCCTTGAATACTGTC
CAAGCTGCGGGAGCTGGCTTCGCAACAACCCATCGAAAGCATCCCCCTTACGCCCTCA
ACCGGGTGCCCTCCCTCATGCCCTGGACTTGGGGAGCTCAAGAAGCTGGAGTATATCTCT
GAGGGAGCTTGAGGGCTGTTCAACCTCAAGTATCTGAACCTGGGATGTGCAACATTAA
AGACATGCCAATCTCACCCCCCTGGTGGGGCTGGAGGGAGCTGGAGATGTCAGGAAACCACT
TCCCTGAGATCAGGCCCTGGCTCCTCCATGCCCTGAGCTCCCTCAAGAAGCTGGGTGATG
AACTCACAGGTAGCCTGATTGAGCGGAATGCTTTGACGGGCTGGCTCAGTGTGAACT
CAACTGGCCCACAATAACCTCTTCTTGGCCATGACCTCTTACCCGCTGAGGTACC
TGGTGGAGTTGCATCTACACCACAACCCCTGGAACTGTGATTGTGACATTCTGTGGCTAGCC
TGGTGGCTTCGAGAGTATATACCCACCAATTCCACCTGCTGTGGCGCTGTGATGCTCCCAT
GCACATGCCAGGGCGCTACCTCGTGGAGGTGGACCAGGGCTCTTCCAGTGCTCTGCCCT
TCATCATGGACGCCACCTCGAGACCTCAACATTCTGAGGGCTGGATGGCAGAACTTAAGTGT
CGGACTCCCCCTATGTCCTCCGTGAAGTGGTGCTGCCAATGGACAGTGCTGCCACGC
CTCCGCCACCAAGGATCTCTGTCCTCAACGACGGCACCTGAACCTTCCCACGTGCTGC
TTTCAGACACTGGGTGTACACATGCATGGTACCAATGTTGAGGCAACTCCAACGCCCTCG
GCCTACCTCAATGTGAGCACGGCTGAGCTTAACACCTCAACTACAGCTTCTCACCACAGT
AACAGTGGAGACCACGGAGATCTGCCCTGAGGACACAACGCGAAAGTACAAGCCTGTTCTA
CCACGTCCACTGGTACCGCCGATATAACCACCTCTACCAACGGTGTCTCATTGAGACTACC
CGTGTGCCAAGCAGGTGGCAGTACCGCGACAGACACCAACTGACAAGATGCAGGACAGCCT
GGATGAAGTCATGAAGACCAAGATCATCATTGGCTGTTGTGGCAGTGACTCTGCTAG
CTGCCGCATGTTGATTGCTTCTATAAAACTTCGTAAGCGGACCGAGCGGGAGTACAGTC
ACAGCCGCCGGACTGTTGAGATAATCCAGGTGGACGAAGACATCCCAGCAGCAACATCCGC
AGCAGCAACAGCAGCTCCGTCCGGTGTATCAGGTGAGGGGGCAGTAGTGCTGCCACAATT
ATGACCATATTAACACACCTACAAACCCAGCACATGGGGCCACTGGACAGAAAACAGC
CTGGGGAACTCTCTGCACCCACAGTCACCACTATCTGAACCTTATATAATTGAGACCA
TACCAAGGACAAGGTACAGGAAACTCAAATTGACTCCCTCCCCAAAAAAACTTATAAAAT
GCAATAGAATGCACACAAAGACAGCAACTTTGTACAGAGTGGGAGAGACTTTCTTGT
TATGCTTATATATTAAGTCTATGGGCTGGTTAAAAAAACAGATTATATTAAAATTAAAGA
CAAAAAGTCAAAACA

FIGURE 157

MKLLWQVTVHHHTWNAILLPFVYLTAQVWILCAAIAAAASAGPQNCPSCSNSQFSKVVC
RRGLSEVPQGIPSNTRYLNLMENNIQMIQADTFRHLHLEVLQLGRNSIRQIEVGAFNGLAS
LNTLELFDNWLTVIPSGAFEYLSKLRELWLRNNPIESIPSYAFNRVPSLMRDLGELKKLEY
ISEGAFEGLFNLKYLNLCMCNIKDMPNLTPLVGLEELEMMSGNHFPEIRPGSFHGLSSLKKLW
VMNSQVSLIERNAFDGLASLVELNLAHNNLSSLPHDLFPLRYLVELHLHHNPWNCDCDILW
LAWWLREYIPTNSTCCGRCHAPMHMRGRYLVEVDQASFQCSAPFIMDAPRDLNISEGRMAEL
KCRTPPMSSVKWLLPNGTVLSHASRHPRISVLNDGTNFHVLLSDTGVYTCMVNVAGNSN
ASAYLNVSTAELNTSNYSFFTTVTVETTEISPEDTRKYKPVPTTSTGYQPAYTTSTTVLIQ
TTRVPKQVAVPATDTTDKMQTSLDEVMKTTKIIIGCFVAVTLLAAAMLIIVFYKLRKRHQQRS
TVTAARTVEIIQVDEDIPAATSAAATAAPSGVSGEAVVLPTIHDIINYNTYKPAHGAHWTE
NSLGNSLHPTVTTISEPYIIQTHTKDKVQETQI

FIGURE 158

CGCTCGGGCACCAAGGATGGAGCTGGTTGCTGGACGCAGTTGGGCTCACTT
 TTCTCAGCTCCTTCTCATCTCGCCTTGCCAAGAGAGTACACAGTCATAATGAAGCCTGC
 CCTGGAGCAGAGTGAATATCATGTGTCGGAGTGCTGTGAATATGATCAGATTGAGTGCCTG
 CTGCCCGAAAGAGGGAAGTCGTGGTTATACCATCCCTGCTGCAGGAATGAGGAGAATG
 AGTGTGACTCCTGCCTGATCCACCCAGGTTACCATCTTGAAAAGTCAAGAGCTGCCGA
 AATGGCTCATGGGGGGTACCTTGATGACTTCTATGTGAAGGGTTCTACTGTGCAGAGTG
 CCGAGCAGGCTGGTACGGAGGACTGCATGCATGTGCCAGGTTCTGCGAGCCCCAAAGG
 GTCAGATTGTTGGAAAGCTATCCCCTAAATGCTCACTGTGAATGGACCATTATGCTAAA
 CCTGGGTTGTCATCCAACAAGATTGTCATGTTGAGTCTGGAGTTGACTACATGTGCCA
 GTATGACTATGTTGAGGTTGATGGAGACAACCAGCGATGCCAGATCATCAAGCGTGTCT
 GTGCCAACGAGCGGCCAGCTCCTATCCAGAGCATAGGATCCTCACTCCACGTCCTTCCAC
 TCCGATGGCTCCAAGAATTGACGGTTCCATGCCATTATGAGGAGATCACAGCATGCTC
 CTCATCCCTGTTCCATGACGGCACGTGCGCTTGACAAGGCTGGATCTTACAAGTGTG
 CCTGCTGGCAGGCTATACTGGCAGCGCTGTGAAAATCTCCTGAAGAAAGAAACTGCTCA
 GACCCCTGGGGGCCAGTCATGGTACCAAGAAAATAACAGGGGCCCTGGGCTTATCACCG
 ACGCCATGCTAAATTGGCACCGTGGTGTCTTCTTTGTAACAACACTCCTATGTTCTTAGTG
 GCAATGAGAAAAGAACTGCCAGCAGAATGGAGAGTGGTCAGGGAAACAGCCATCTGCATA
 AAAGCTGCCAGAACCAAAGATTTCAGACCTGGTGAGAAGGAGAGTCTTCCGATGCAGGT
 TCAGTCAGGGAGACACCATTACACCAGCTATACTCAGCGGCCCTCAGCAAGCAGAAACTGC
 AGAGTCCCCCTACCAAGAAGCCAGCCCTCCCTTGAGATCTGCCATGGATACCAACAT
 CTGCATACCCAGCTCCAGTATGAGTGCATCTCACCCCTTCTACCGCCGCTGGCAGCAGCAG
 GAGGACATGTCAGGACTGGGAAGTGGAGTGGCAGGCCACCATCCTGCATCCCTATCTGCG
 GGAAAATTGAGAACATCACTGCTCAAAGACCCAAGGGTTGCCCTGGCAGGAGCC
 ATCTACAGGAGGACCAGCGGGTGCATGACGGCAGCCTACACAAGGGAGCGTGGTTCTTAGT
 CTGCAGCGGTGCCCTGGTGAATGAGCGCACTGTGGTGGCTGCCACTGTGTTACTGACC
 TGGGAAGGTACCATGATCAAGACAGCAGACCTGAAAGTTGTTTGGGAAATTCTACCGG
 GATGATGACCAGGGATGAGAACGACCATCCAGAGCCTACAGATTCTGCTATCATTCTGCATCC
 CAACTATGACCCATCCTGCTTGTGCTGACATCGCCATCCTGAAGCTCCTAGACAAGGCC
 GTATCAGCACCGAGTCCAGCCATCTGCCCTGCGCTGCCAGTCGGGATCTCAGCACTCCTTC
 CAGGAGTCCCACATCACTGTGGCTGGCTGGAAATGTCTGGCAGACGTGAGGAGCCCTGGCTT
 CAAGAACGACACACTGCCCTCTGGGTGGTCAGTGTGGTGGACTCGCTGCTGTGAGGAGC
 AGCATGAGGACCATGGCATCCAGTGAGTGTCACTGATAACATGTTCTGCTGCCAGCTGGAA
 CCCACTGCCCTCTGATATCTGCACTGCAGAGACAGGAGGCATCGCGCTGTGTCCTTCCC
 GGGACGAGCATCTCCTGAGCCACGCTGGCATCTGATGGACTGGTCAGCTGGAGCTATGATA
 AACATGCAGCCACAGGCCTCCACTGCCCTCACCAAGGTGCTGCCCTTAAAGACTGGATT
 GAAAGAAATATGAAAATGAAACCATGCTCATGCACTCCTGAGAAGTGTGTTCTGATATCCGTC
 TGTCAGTGTGTCATTGCGTGAAGCAGTGTGGCCTGAAAGTGTGATTGGCCTGTGAACCTGG
 CTGTGCCAGGGCTCTGACTTCAGGGACAAAACACTCAGTGAAGGGTGAGTAGACCTCCATTGC
 TGGTAGGCTGATGCCCGTCCACTACTAGGACAGCCAATTGGAAGATGCCAGGGCTGCAAG
 AAGTAAGTTCTCAAAGAACCATATACAAAACCTCCACTCCACTGACCTGGTGGTCT
 TCCCCAACTTCAGTTATCGAATGCCATCAGCTTGACCAAGGGAAAGATCTGGCCTTCATGAG
 GCCCCTTGTAGGGCTCTCAAGTTAGAGAGCTGCCCTGAGGACAGCCAGGGCAGCAGAGC
 TGGGATGTGGTGCATGCCCTTGTGATGCCACAGTACAGTCTGGTCTTCCCTTCCCC
 ATCTCTGTACACATTAAATAAAATAAGGTTGGCTTCTGAACTACAAAAAA
 AAA
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

*162/310***FIGURE 159**

MELGCWTQLGLTFLQLLLSSLPREYTVINEACPGAEWNIMCRECCEYDQIECVCPGKREVV
GYTI PCCRNEENECDSCLIHPGCTIFENCKSCRNGSWGGTLDDFYVKGFYCAECRAGWYGGD
CMRCGQVLRAPKGQILLESYPLNAHCEWTIHAKPGFVIQLRFVMLSLEFDYMCQYDYVEVRD
GDNRDGQIIKRVCGNERPAPIQSIGSSLHVLFHSDGSKNFDGFHAIYEETACSSSPCFHDG
TCVLDKAGSYKCACLAGYTGQRCENLLEERNCSDPGGPVNGYQKITGGPGLINGRHAKIGTV
VSFFCNNSYVLSGNEKRTCQQNGEWSGKQPICIKACREP KISDLVRRRLPMQVQSRETPLH
QLYSAAFSKQKLQSAPTKKPALPFGDLPGMYQHLHTQLQYECISPFYRRLGSSRRTCLRTGK
WSGRAPSCIPI CGKIENITAPKTQGLRW PWQAAIYRRTSGVHD GSLHKGA WFLVC SGALVNE
RTVVVAAHCVTDLGKVTMIKTADLKVV LGKFYR DDRDEKTIQSLQISAIILHP NYDPILLD
ADIAILKLLDKARI STRVQ PICLAASRDLSTS FQESHITVAGWNV LADVRSPGFKN DTLRSG
VVS VVDSL LCEEQHEDHGIPVSVTDNMFCASWEPTAPS DICTAETGGIAAVSF PGRA SPEPR
WHLMGLVWSYDKTCSHRLSTAFTKVLPFKDWIERNMK

FIGURE 160

ACCAAGGCATTGTATCTTCAGTTGTCATCAAGTTCGCAATCAGATTGGAAAAGCTCAACTTGA
AGCTTTCTTGCTGCAGTGAAGCAGAGAGATAGATATTATTACAGTAATAAAAACATGGC
TTCAACCTGACTTCCACCTTCCACAAATTCCGATTACTGTTGCTGTTGACTTTGTGCCT
GACAGTGGTTGGGTGGGCCACCAGTAACACTTCGTGGTGCCATTCAAGAGATTCTAAAG
CAAAGGAGTTCATGGCTAATTCCATAAGACCCCTATTGGGGAGGGAAAAACTCTGACT
AATGAAGCATCCACGAAGAAGGTAGAACCTGACAACACTGTCTTCTGTCTCCTTACCTCAG
AGGCCAGAGCAAGCTCATTTCAAACCAAGATCTCACTTGGAAAGAGGTACAGGCAGAAAATC
CCAAAGTGTCCAGAGGCCGGTATGCCCTCAGGAATGTAAGCTTACAGAGGGTGCCTACCTC
GTTCCCCACCGGAACAGAGAGAAACACCTGATGTACCTGCTGGAACATCTGCATCCCTTCC
GCAGAGGCAGCAGCTGGATTATGGCATCTACGTCACTCACCAGGCTGAAGGTAAAAAGTTA
ATCGAGCCAACACTCTGAATGTGGCTATCTAGAACCCCTCAAGGAAGAAAATTGGGACTGC
TTTATATTCCACGATGTGGACCTGGTACCCGAGAACAGACTGGTACAGGTTACAGTGGAT
GCATCCCAAGCATCTGGTGGTTGCAGGAACAGCACTGGTACAGGTTACAGTGGAT
ATTTGGGGTGTACTGCCCTAACAGAGAGGCAGTTTCAAGGTGAATGGATTCTCTAAC
AACTACTGGGATGGGAGGCAGAACAGATGACCTCAGACTCAGGGTTGAGCTCCAAAGAAT
GAAAATTCCCGCCCTGCCTGAAGTGGTAAATAACATGGCTTCCACACTAGAGACA
AAGGCAATGAGGTGAACCGAGAACGGATGAAGCTCTAACCAAGTGTACGAGTCTGGAGA
ACAGATGGGTTGAGTAGTTGTTCTTATAAATTAGTATCTGTGGAACACAATCCTTATATAT
CAACATCACAGTGGATTCTGGTTGGTGCATGACCCTGGATCTTGTTGATGTTGGAAAG
AACTGATTCTTGTGCAATAATTGGCCTAGAGACTTCAAATAGTAGCACACATTAAGA
ACCTGTTACAGCTCATTGAGCTGAATTTCCTTTGTATTTCTTAGCAGAGCTCCT
GGTGTAGAGTATAAAACAGTTGTAACAAGACAGCTTCTTAGTCATTGATCATGAGG
GTTAAATATTGTAATATGGACTTGAAGGACTTATATAAAAGGATGACTCAAAGGATAAA
ATGAACGCTATTGAGGACTCTGGTTGAAGGAGATTATTAAATTGAGTAATATATTAT
GGGATAAAAGGCCACAGGAAATAAGACTGCTGAATGTCAGAGAGAACAGAGTTGTTCTCGT
CCAAGGTAGAAAGGTACGAAGATAACAATACTGTTATTCAATTATCCTGTACAATCATCTGT
AAAGTGGTGGTGTCAAGGTGAGAAGGCAGTCCACAAAGAGGGAGAAAGGCAGCAATCAGGA
CACAGTGAACCTGGGAATGAAGAGGTAGCAGGAGGGTGGAGTGTGGCTGCAAAGGCAGCAG
TAGCTGAGCTGGTTGCAGGTGCTGATAGCCTTCAGGGAGGACCTGCCAGGTATGCCCTCC
AGTGATGCCACCAAGAGAACATCTCTATTAGTTTAAAGAGTTTGTAAAATGATT
TGTACAAGTAGGATATGAATTAGCAGTTACAAGTTACATATTAACATAATAAAATATGT
CTATCAAATACCTCTGTAGTAAATGTGAAAAAGCAAAA

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FIGURE 161

MGFNLTFHLSYKFRLLLLTLCLTVVGWATSNYFVGAIQEIPKAKEFMANFHKTLLIGKGKT
LTNEASTKKVELDNCPSVSPYLRGQSKLIFKPDLTLEEVQAENPKVSRGRYRPQECKALQRV
AILVPHRNREKHLMYLLEHLHPFLQRQQLDYGIYVIHQAEKKFNRAKLLNVGYLEALKEEN
WDCFIFHDVDLVPENDFNLYKCEEHPKHLVVGRNSTGYRLRYSGYFGGVTAALSREQFFKVNG
FSNNYWGGEDDDLRLRVELQRMKISRPLPEVGKYTMVFHTRDKGNEVNAERMKLLHQVSR
VWRTDGLSSCSYKLVSVEHNPLYINITVDFWFGA

Important features:

Signal peptide:

amino acids 1-27

N-glycosylation sites:

amino acids 4-7, 220-223 and 335-338

Xylose isomerase proteins:

amino acids 191-201

FIGURE 162

CGTGGGCCGGGTCGCAGCAGGGCTGTGGCGCCGGAGGAGCGACCGCCGAGTTCTC
GAGCTCCAGCTGCATTCCCTCCCGCTCCGCCACGCTTCTCCGCTCCGGCCCCCA**ATG**
GCCAGGCAGTGTGGTCGCCTCGGCCATCCTCTGGCTTGCCCTGCCCTGGG
CCCAGGGTGGCCAGGCCTGTATGAACACTAACACCAGATAGCCCTGCCACCA
CGGGAGCGGTGGTGACCATCTCGGCCAGCCTGGTGGCAAGGACAACGGCAGCCTGGCCCTG
CCCGCTGACGCCACCTCACCGCTTCACTGGATCCACACCCGCTGGTGTACTGGCAA
GATGGAGAAGGGTCTCAGCTCCACCATCCGTGTGGCCACGTGCCAGCTGTGGCCAGGGGATTCCCGG
TCTCTGTCTGGGTCACTGCCGTGACTGCTGGATGTGCCAGCCTGTGGCCAGGGCTTGTG
GTCCTCCCCATCACAGAGTCTCTGTGGGGACCTTGTGACCCAGAACACTCCCTACC
CTGGCCAGCTCTATCTCACTAACAGCTGAAAGTCTCTTCTCCACGACCCGA
GCAACTTCTCAAGACCCCTTGTCTACAGCTGGACTCAGGGACGGGACCCAGATG
GTGACTGAAGACTCCGTGGTCTATTAACTATTCCATCATGGGACCTTACCGTGAAGCT
CAAAGTGGTGGCGAGTGGAGAGGTGGAGCCGATGCCACGAGGGCTGTGAAGCAGAAGA
CCGGGACTTCTCCGCTCGCTGAAGCTGCAGGAAACCCCTCGAGGCATCCAAGTGTGGGG
CCCACCTAATTCAAGACCTCCAAAAGATGACCGTGAACCTGAACTTCTGGGAGGCCCTCC
TCTGACTGTGTGCTGGCGTCTAACGCTGAGTGCCTCCGCTGGAGGAAGGGAGTGCACC
CTGTGTCCGTGCCAGCACAGTACAACCTGACCCACACCTCAGGGACCTGGGACTAC
TGCTTCAGCATCCGGGCCAGAAATATCATCAGCAAGACACATCAGTACCAAGATCCAGGT
GTGCCCTCCAGAATCCAGCCGGCTGTCTTGCTTCCATGTGCTACACTTATCACTGTGA
TGTGGCCTTCATCATGTACATGACCTGCGGAATGCCACTCAGCAAAGGACATGGTGGAG
AACCCGGAGCCACCCCTGGGGTCAGGTGCTGCTCAGATGTGCTGTGGCCTTCTGCT
GGAGACTCCATCTGAGTACCTGGAAATTGTTGTCGTGAGAACACAGGGCTGCTCCGCCCCCT
ATAAGTCTGTCAAAACTACACCGTGT**GAG**ACTCCCCCTCCCCACCCATCTCAGTGTAA
CTGACTGCTGACTGGAGTTCCACGAGGTGGTGTGACCAACTGACCAGGAGGGTTCA
TGCCTGGGCTGTTGGCTGGATCATCCATCTGTACAGTTCAGCCACTGCCACAAGCC
CCTCCCTCTGTCAACCCCTGACCCAGCCATTACCCATCTGTACAGTCCAGCCACTGACA
TAAGCCCCACTCGTTACCACCCCTTGACCCCTACCTTGAAAGAGGCTCGTCAGGACT
TTGATGCTGGGTGTTCCGTGTTGACTCTAGGTGGCCTGGCTGCCACTGCCATTCT
CTCATATTGGCACATCTGCTGTCCATTGGGGTTCTCAGTTCTCCCCAGACAGCCCTAC
CTGTGCCAGAGAGCTAGAAAGAGTCATAAAGGTTAAAATCCATAACTAAAGGTTGTAC
ACATAGATGGCACACTCACAGAGAGAAGTGTGCATGTACACACACCACACACACA
CACACACACAGAAATATAACACATGCGTCACATGGCATTTCAGATGATCAGCTCTGTA
TCTGGTTAAGTCGGTTGCTGGGATGCACCCCTGCACTAGAGCTGAAAGGAAATTGACCTCA
AGCAGCCCTGACAGGTTCTGGCCGGGCTCCCTTGCTTGTCTGCACTTGTG
GCCCTTATAAGGCCATCCTAGTCCCTGCTGGCTGGCAGGGGCTGGATGGGGCAGGACT
AAACTGAGTGATTGCAAGAGTGCTTATAAAATACACCTTATTGATCGAAACCCATCTGTG
AAACTTCACTGAGGAAAGGCCTTGCAGCGGTAGAAGAGGTTGAGTCAGGCCGGCG
TGGCTCACGCCGTAACTCCAGCACTTGGAGGCCAGGCGGGTGGATCACGAGATCAGGA
GATCGAGACCACCCCTGGCTAACACGGTGAACACCCGTCTACTAAAAAAATACAAAAAGTT
AGCCGGCGTGGTGGTGGCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATG
GTGCAACCCGGAGGCCAGCTGCAGTGAGCCCAGATGGGCCACTGCACTCCAGCCTGA
GTGACAGAGCAGACTCTGTCTCCA

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FIGURE 163

MAQAVWSRLGRILWLACLLPWAPAGVAAGLYELNLTTDSPATTGAVVTISASLVAKDNGSLA
LPADAHLYRFHWIHTPLVLTGKMEGLSSTIRVVGHVPGEFPVSWWTAADCWMCQPVARGF
VVLPITEFLVGDLVVTQNTSLPWPSYLTKTVLKVSFLLHDPSNFLKTALFLYSWDFGDGTQ
MVTEDSVVYYNYSIIGTFTVKLVVAEWEVEPDATRAVKQKTGDFSASLKLQETLRGIQVL
GPTLIQTFQKMTVTLNFLGSPLTCWRLKPECLPLEEGECHPVSVASTAYNLHTFRDPGD
YCFSIRAENIISKTHQYHKIQVWPSRIQPAVFACATLITVMLAFIMYMTLRNATQQKDMV
ENPEPPSGVRCCCQMCCGPFLLETPSEYLEIVRENHGLLPPLYKSVKTYTV

Important features of the protein:

Signal peptide:

amino acids 1-24

Transmembrane domain:

amino acids 339-362

N-glycosylation sites.

amino acids 34-37, 58-61, 142-145, 197-200, 300-303 and 364-367

FIGURE 164

GCTCAAGACCCAGCAGTGGGACAGCCAGACAGACGGCACGTGGCACTGAGCTCCCAGATCT
GGGCCGCTTGCCTCCTGCTCCTCCTCGCCAGCCTGACCAGTGGCTCTGTTTCCA
CAACAGACGGACATTGCAGAGCTGCAACCCAGGACAGAGCTGGAGCCAGGCCAGCTG
GATGCCATGTTCCAGAGGCGAAGGAGGCGAGACACCCACTTCCCCATCTGCATTTCTGCT
GCGGCTGCTGTCATCGATCAAAGTGTGGATGTGCTGCAAGACGTAGAACCTACCTGCCCTG
CCCCCGTCCCTCCCTTATTATTCCTGCTGCCAGAACATAGGTCTTGGAAATAAAA
TGGCTGGTTCTTTGTTTCCAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAA

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FIGURE 165

MALSSQIWAACLLLLLLASLTSGSVFPQQTGQLAELQPQDRAGARASWMPMFQRRRRDTH
FPICIFCCGCCHRSKCGMCCKT

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FIGURE 166

CTGTCAGGAAGGACCATCTGAAGGCTGCAATTGTTCTAGGGAGGCAGGTGCTGGCCTGGC
CTGGATCTTCCACCATGTTCCTGTTGCTGCCTTTGATAGCCTGATTGTCAACCTTCTGGC
ATCTCCCTGACTGTCCTCTCACCCCTCCTCTCGTTTCACTCATAGTGCCAGCCATTGG
AGTCTCCTTGGTATCCGCAAACCTACATGAAAAGTCTGTTAAAATCTTGCGTGGGCTA
CCTTGAGAATGGAGCGAGGAGCCAAGGAGAAGAACCAACAGCTTACAAGCCCTACACCAAC
GGAATCATTGCAAAGGATCCCACCTCACTAGAAGAAGAGATCAAAGAGATTGTCGAAGTGG
TAGTAGTAAGGCTCTGGACAACACTCCAGAGTTCGAGCTCTGACATTTCTACTTTGCC
GGAAAGGAATGGAGACCAATTATGGATGATGAGGTGACAAAGAGATTCTCAGCAGAAGAACTG
GAGTCCTGGAACCTGCTGAGCAGAACCAATTATAACTTCCAGTACATCAGCCTCGGCTCAC
GGTCCTGTGGGGTTAGGAGTGCTGATTGGTACTGCTTCTGCTGCCGCTCAGGATAGCAC
TGGCTTCACAGGGATTAGCCTCTGGTGGCACAACACTGTGGTGGGAACTGCAAAT
GGGAGGTTAAGGAATTATGAGTAAACATGTTCACTTAATGTGTTACCGGATCTGCGTGC
AGCGCTGACAGCCATCATCACCTACCATGACAGGGAAACAGACCAAGAAATGGTGGCATCT
GTGTGCCAACATCATACCTCACCGATCGATGTGATCATCTTGGCCAGCGATGGCTATTATGCC
ATGGTGGGTCAAGTGCACGGGGACTCATGGGTGTGATTGAGAGGCCATGGTGAAGGCC
CCACACGTCTGGTTGAGCGCTCGGAAGTGAAGGATGCCACCTGGTGGCTAAGAGACTGA
CTGAACATGTGCAAGATAAAAGCAAGCTGCCTATCCTCATCTCCCAGAAGGAACCTGCATC
AATAATACATCGGTGATGATGTTCAAAAGGGAAAGTTGAAATTGGAGCCACAGTTACCC
TGGTGTATCAAGTATGACCCCTCAATTGGCGATGCCTCTGGAACAGCAGCAAATACGGGA
TGGTGACGTACCTGCTGCGAATGATGACCAAGCTGGCCATTGCTGAGCGTGTGGTACCTG
CCTCCCATGACTAGAGAGGCAGATGAAGATGCTGTCCAGTTGCGAATAGGGTGAATCTGC
CATTGCCAGGCAGGGAGGACTTGTGGACCTGCTGTGGATGGGGCTGAAGAGGGAGAAGG
TGAAGGACACGTTCAAGGAGGAGCAGCAGAAAGCTGTACAGCAAGATGATCGTGGGAACAC
AAGGACAGGAGCCGCTTGAGCCTGCCTCCAGCTGGCTGGGCCACCGTGCAGGGTGC
CGGGCTCAGAGCTGGAGTTGCCGCCGCCACTGCTGTGTCCTTCCAGACTCCAGGG
CTCCCCGGGCTGCTCTGGATCCCAGGACTCCGGCTTCGCCAGCGCAGGGATCCCTGT
GCACCCGGCGCAGCCTACCCCTGGTGGCTAAACGGATGCTGCTGGTGTGCGACCCAGGA
CGAGATGCCTTGTCTTACAATAAGTGTGGAGGAATGCCATTAAAGTGAACCTCCCCA
CCTTGACGCTGTGCGGGCTGAGTGGTTGGGAGATGTGGCCATGGTCTTGTGCTAGAGAT
GGCGGTACAAGAGTCTGTTATGCAAGCCCCTGTGCCAGGGATGTGCTGGGGCGGCCACCCG
CTCTCCAGGAAAGGCACAGCTGAGGCAGTGTGGCTGGCTCCAGGCTAAACATGCC
CTTGGAGCTCTGCAGACATGATAGGAAGGAAACTGTCATCTGCAGGGCTTCAGCAAATG
AAGGGTTAGATTGCTGCTGTGATGGGTTACTAAAGGGAGGGAAAGAGGCCAGGTG
GGCGCTGACTGGGCCATGGGGAGAACGTGTGTTCTGACTCCAGGCTAACCTGAACCTCCCC
ATGTGATGCGCGCTTGTGAATGTGTCGGTTCCCATCTGTAATATGAGTCGGGG
GAATGGTGGTATTCTACCTCACAGGGCTGTTGTGGGATTAAAGTGTGCTGCCGGTGA
AGGACACATCACGTTCAAGTACAGGCCACAAACGGGGCACGGCAGGCCTGAG
CTCAGAGCTGCTGCACTGGCTTGGATTGTTGTGAGTAAATAACTGGCTGGTGAATGA

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FIGURE 167

MFLLLPFDLSIVNLLGISLTVLFTLLLVFIIVPAIFGVSGIRKLYMKSLKIFAWATLRME
RGAKEKNHQLYKPYTNGIIAKDPTSLEEEIKEIRRSGSSKALDNTPEFELSDIFYFCRKGMETIMDDEVTKRFSAAELESWNLLSRTNYNFQYISLRLTVLWGLGVLIRYCFLLPLRIALAFTG
ISLLVVGTTVVGYLPNGRFKEFMSKHVHLMCYRICVRALTAIITYHDRENPRNNGGICVANHTSPIDVIILASDGYYAMVGQVHGGLMGVIQRAMVKACPHWFERSEVKDRHLVAKRLTEHVQDKSKLPILIFPEGTCINNTSMMFKGSFEIGATVYPVAIKYDPQFGDAFWNSSKYGMVTYL
LRMMTSWAIVCSVWYLPPTREADEDAVQFANRVKSAIARQGLVDLLWDGGLKREKVKDTF
KEEQQKLYSKMIVGNHKDRSRS

FIGURE 168

GCCCCTCGAAACCAGGACTCCAGCACCTCTGGTCCGCCCTACCCGGACCCCTGGCCCTCA
CGTCTCCTCCAGGGATGGCGCTGGCGGTTGATGATGCCCTCGGCAGCCTGGCCTCCAC
ACCTGGCAGGCCAGGCTGTTCCCACCATCCTGCCCTGGCCTGGCTCCAGACACCTTGAG
CGATACTATGTGGGTTGTGCAGAGGAGATGGAGGAAGGCAGCCCCCTGCTAAAGGAGG
AAATGCCACCAGGCCCTGCTGCCGAATCCTGGGAGGCAGCCAGGAGACCTGGGAGGAC
AAGCGTCGAGGGCTTACCTGCCCTGGCTCAAAGCCCAGAATGGAATAGCATTATGGT
CTACACCAACTCATCGAACACCTGTACTGGGAGTTGAATCAGGCCGTGCGGACGGCGGAG
GCTCCGGGAGCTACATGAGGCACCTTCCCTCAAGGCCCTGCATTCTACCTGATCCGG
GCCCTGCAGCTGCTGCGAGGCAGTGGGGCTGCAGCAGGGACCTGGGAGGTGGTGGTCCG
AGGTGTGGGAGCCTCGCTTGAACCCAAGAGGCTGGGGACTCTGTCCGCTGGCCAGT
TTGCCTCCAGCTCCCTGGATAAGGCAGTGGCCCACAGATTGGGAGAAGAGGCCGGCTGT
GTGTCTGCGCCAGGGTGCAGCTAGGGTCACAATCTGAGGGGCCTCCTCTGCCCTCG
GAAGACTCTGCTCTGGCCCTGGAGAGTTCCAGCTCTCAGGGTTGGGCCTGAAAGTCCA
ACATCTGCCACTTAGGAGCCCTGGAACGGTGACCTCATATGACGAAGAGGCACCTCCAG
CAGCCTGAGAACATGGTCCGGACCCAGCCCTAGCAGCCTCTCCCAACCAGG
ATGTTGGCCTGGGAGGCCACAGCAGGGCTGAGGAACCTGCTATGTGATGGGACTTCCT
GGGACAAGCAAGGAAAGTACTGAGGCAGCCACTTGATTGAACGGTGGCAATGTGGAGACA
TGGAGTTTATTGAGGTAGCTACGTGATTAAATGGTATTGCAGTGTGGA

*172/310***FIGURE 169**

MALAALMIALGSLGLHTWQAQQAVPTILPLGLAPDTFDDTYVGCAEEMEEKAAPLLKEEMAH
ALLRESWEAAQETWEDKRRGLTLPPGFKAQNGIAIMVYTNSNTLYWELNQAVRTGGGSREL
YMRHFPFKALHFYLIRALQLLRGSGGCSRGPGEVVFRGVGSLRFEPKRLGDSVRLGQFASSS
LDKAVAHRFGEKRRGCVSAPGVQLGSQSEGASSLPPWKTLLLAPGEFQLSGVGP

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FIGURE 170

GTGGCTTCATTCAGTGGCTGACTTCCAGAGAGCAATATGGCTGGTCCCCAACATGCCTCA
CCCTCATCTATATCCTTGGCAGCTCACAGGGTCAGCAGCCTCTGGACCCGTGAAAGAGCTG
GTCGGTTCCGGTGGTGGGCCGTACTTCCCCCTGAAGTCAAAGTAAAGCAAGTTGACTC
TATTGTCTGGACCTTCAACACAACCCCTTGTCAACATACAGCCAGAAGGGGGCACTATCA
TAGTGACCCAAAATCGTAATAGGGAGAGAGTAGACTTCCCAGATGGAGGCTACTCCCTGAAG
CTCAGCAAACGTGAAGAAGAATGACTCAGGGATCTACTATGTGGGATATACAGCTCATCACT
CCAGCAGCCCTCCACCCAGGAGTACGTGCTGCATGTACGAGCACCTGTCAAAGCCTAAAG
TCACCATGGGTCTGCAGAGCAATAAGAATGGCACCTGTGTGACCAATCTGACATGCTGCATG
GAACATGGGAAGAGGATGTGATTTACCTGAAAGGCCCTGGGCAAGCAGCCAATGAGTC
CCATAATGGGTCCATCCTCCCCATCTCCTGGAGATGGGAGAAAGTGTATGACCTTCATCT
GCGTTGCCAGGAACCCTGTCAGCAGAAACTCTCAAGCCCCATCCTGCCAGGAAGCTCTGT
GAAGGTGCTGCTGATGACCCAGATTCCCTCATGGTCCTCTGTCTCCTGTTGGTGCCCT
CCTGCTCAGTCTTTGACTGGGCTATTCTTGTTCTGAAGAGAGAGAGACAAGAAG
AGTACATTGAAGAGAAGAAGAGAGTAGGACATTGTCGGAAACTCTAACATATGCCCAT
TCTGGAGAGAACACAGAGTACGACACAATCCCTCACACTAATAGAACAAATCTAAAGGAAGA
TCCAGCAAATACGGTTACTCCACTGTGAAATACGAAAAAGATGGAAAATCCCCACTCAC
TGCTCACGATGCCAGACACACCAAGGCTATTGCCTATGAGAATGTTATCTAGACAGCAGTG
CACTCCCCCTAAGTCTTGCTCA

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FIGURE 171

MAGSPTCLTLIYILWQLTGSAASGPVKELVGSVGGAVTFPLKSKVQVDSIVWTFNTTPLVT
IQPEGGTIIVTQNRNRERVDFFDGGYSLKLSKLKKNDSGIYYVGIYSSLQQPSTQEYVLHV
YEHLSKPVMTMGLQSNKNGTCVTNLTCMEHGEEDVIYTWKALGQAANESHNGSILPISWRW
GESDMTFICVARNPVSRNFSPIALKCEGAADDPDSSMVLLCLLVPLLLSLFVLGLFLW
FLKRERQEEYIEEKKRVDICRETPNICPHSGENTEYDTIPHTNRTILKEDPANTVYSTVEIP
KKMENPHSLLTMPDTPRLFAYENVI

FIGURE 172

CTGGTTCCCCAACATGCCTCACCCCATCTATATCCTTGGCAGCTCACAGGGTCAGCAGCC
TCTGGACCGTGAAAGAGCTGGTCGGTCCGTTGGTGGGGCCGTGACTTTCCCCCTGAAGTC
CAAAGTAAAGCAAGTTGACTCTATTGTCTGGACCTTCAACACAACCCCTTTGTACCATAAC
AGCCAGAAGGGGGCACTATCATAGTGACCCAAAATCGTAATAGGGAGAGTAGACTTCCA
GATGGAGGCTACTCCCTGAAGCTCAGCAAACGTGAAGAAGAATGACTCAGGGATCTACTATGT
GGGGATATACAGCTCATCACTCCAGCAGCCCTCCACCCAGGAGTACGTGCTGCATGTCTACG
AGCACCTGTCAAAGCCTAAAGTCACCATGGGTCTGCAGAGCAATAAGAATGGCACCTGTGTG
ACCAATCTGACATGCTGCATGGAACATGGGAAGAGGGATGTGATTATACCTGGAAGGCC
GGGGCAAGCAGCCAATGAGTCCCATAATGGGTCCATCCTCCCCATCCTGGAGATGGGAG
AAAGTGATATGACCTTCATCTGCCTGCCAGGAACCCCTGTCAAGCAAACCTCTCAAGCCCC
ATCCTGCCAGGAAGCTCTGTGAAGGTGCTGCTGATGACCCAGATTCCCTCATGGCCTCCT
GTGTCTCCTGTTGGTGCCCTCCTGCTCAGTCTTGTACTGGGCTATTCTTGGTTTC
TGAAGAGAGAGACAAGAAGAGTACATTGAAGAGAAGAAGAGAGTGGACATTGTCGGAA
ACTCCTAACATATGCCCTATTCTGGAGAGAACACAGAGTACGACACAATCCCTCACACTAA
TAGAACAAATCCTAAAGGAAGATCCAGCAAATACGGTTACTCCACTGTGGAAATACGAAAA
AGATGGAAAATCCCCACTCACTGCTCACGATGCCAGACACACCAAGGCTATTGCCTATGAG
AATGTTATCTAGACAGCAGTGCACTCCCTAAGTCTGCTCAAAAAAAAAAAAAAA

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FIGURE 173

GAAAGACGTGGTCTGACAGACAGACAATCCTATTCCCTACCAAAATGAAGATGCTGCTGCT
GCTGTGTTGGACTGACCCTAGTCTGTGCCATGCAGAAGAAGCTAGTTCTACGGGAAGGA
ACTTTAATGTAGAAAAGATTAATGGGAATGGCATACTATTATCCTGGCCTCTGACAAAAGA
GAAAAGATAGAAGAACATGGCAACTTAGCTTTCTGGAGCAAATCCATGTCTGGAGAA
TTCCTTAGTTCTAAAGTCATACTGTAAGAGATGAAGAGTGCTCCGAATTATCTATGGTTG
CTGACAAAACAGAAAAGGCTGGGAATATTCTGTGACGTATGATGGATTCAATAACATTTACT
ATACCTAACAGACAGACTATGATAACTTCTATGGCTCACCTCATTAACGAAAAGGATGGGA
AACCTCCAGCTGATGGGCTCTATGGCCGAGAACAGATTGAGTTCAGACATCAAGGAAA
GGTTGCACAACATGTGAGGAGCATGGAATCCTAGAGAAAATATCATTGACCTATCCAAT
GCCAATCGCTGCCTCCAGGCCGAGAACATGAAGAATGGCCTGAGCCTCAGTGTGAGTGGAC
ACTTCTCACCAGGACTCCACCATCCCTCCTATCCATACAGCATCCCCAGTATAAATTC
TGTGATCTGCATTCCATCCTGTCTCACTGAGAAGTCCAATTCCAGTCTATCAACATGTTACC
TAGGATACCTCATCAAGAATCAAAGACTTCTTAAATTCTTTGATACACCCTGACAAT
TTTCATGAAATTATTCCCTCTTCCTGTTCAATAATGATTACCCCTGCACTTAA

FIGURE 174

MKMLLLCLGLTLVCVHAEVASSTGRNFNVEKINGEWTIILASDKREKIEEHGNFRLFLEQ
IHVLENSLVLKVHTVRDEECSELSMVADKTEKAGEYSVTYDGFNTFTIPKTDYDNFLMAHLI
NEKDGETFQLMGLYGREPDLSIDIKERFAQLCEEHGILRENIIDLSANRCLQARE

*178 / 310***FIGURE 175**

GGCTCGAGCGTTCTGAGCCAGGGTGACCATGACCTGCTGCGAAGGATGGACATCCTGCAA
TGGATTCA~~G~~CCTGCTGGTTCTACTGCTGTTAGGAGTAGTTCTCAATGCGATA~~C~~CTCTAATTG
TCAGCTTAGTTGAGGAAGACCAATTTCTAAAACCCATCTCTGCTTGAGTGGTGGTTCC
CCAGGAATTATAGGAGCAGGTCTGATGCCATTCCAGCAACAACAATGTCCTTGACAGCAAG
AAAAAGAGCGTGCTGCAACAACAGAACTGGAATGTTCTTCATCATTTCAGTGTGATCA
CAGTCATTGGTGC~~T~~GTATTGCATGCTGATATCCATCCAGGCTCTTAAAAGGTCTC
ATGTGTAATTCTCAAGCAACAGTAATGCCAATTGTAATTTCATTGAAAAACATCAGTGA
CATTCCAGAAC~~T~~CTCAACTGCAGTGGTTTCAATGACTCTTGTGCACCTCCTACTG
GTTTCAATAAACCCACCAGTAACGACACC~~A~~GGCGAGTGGCTGGAGAGCATCTAGTTCCAC
TTCGATTCTGAAGAAAACAAACATAGGCTATCCACTCTCAGTATTAGGTCTATTGCT
TGTTGGAATTCTGGAGGTCTGTTGGCTCAGTCAGATAGTCATCGGTTCTGGCTGTC
TGTGTGGAGTCTCTAAGCGAAGAAGTC~~AA~~ATTGTGTAGTTAATGGAA~~AA~~ATGTAAGTA
TCAGTAGTTGAAAAAAAAAAA

FIGURE 176

MTCCEGWTSCNGFSLLVLLLLGVVLNAIPLIVSLVEEDQFSQNPISCFEWFWPGIIGAGLMA
IPATTMSLTARKRACCNRTGMFLSSFFSVITVIGALYCMLISIQALLKGPLMCNSPSNSNA
NCEFSLKNISDIHPESFNLQWFFNDSCAPPTGFNKPTSNDTMASGWRASSFHFDSEENKHRL
IHFSVFLGLLLGVILEVLFGLSQIVIGFLGCLCGVSKRRSQIV

*180/310***FIGURE 177**

GTCGAATCCAAATCACTCATTGTGAAAGCTGAGCTCACAGCGAATAAGCCACCATGGAGGCT
GTCAGTGTCTCCTGATGGTCTCGCTGGCCCTTGCTGCTACCAGGCCATGCTCTGTCT
GCCAGCTGTTGCTCTGAGATCACAGTCTTCTTATTCTTAAGTGACGCTGCGTAAACCTC
CAAGTTGCCAAACTTAATCCACCTCCAGAACGCTCTGCAGCCAAGTTGGAAGTGAAGCACTG
CACCGATCAGATATCTTTAAGAACGACTCTCATGAAAAAGTCCTGGTGGAATAGTGAA
AAAATGTGGTGTGACATGTAAAAATGCTCAACCTGGTTCAAAGTCTTCAACGACACC
CTGATCTTCACTAAAATTGTAAAGGTTCAACACGTTGCTTAATAAAACTGCCCCTGC

FIGURE 178

MRLSVCLLMVSLALCCYQAHALVCPAVASEITVFLFLSDAAVNLQVAKLNPPPEALAAKLEV
KHCTDQISFKKRLSLKKSWWK

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FIGURE 179

ATCCGTTCTCTCGCAGCTCAGGTGAGCCCTGCCAAGGTGACCTCGCAGGACACTGG
TGAAGGAGCAGTGAGAACCTGCAGAGTCACACAGTTGCTGACCAATTGAGCTGTGAGCCTG
GAGCAGATCCGTGGGCTGCAGACCCCCGCCAGTGCCTCTCCCCCTGCAGCCCTGCCCTC
GAACGTGACATGGAGAGAGTGACCCCTGGCCCTTCCTACTGGCAGGCCTGACTGCCTTGG
AAGCCAATGACCCATTGCCAATAAGACGATCCCTCTACTATGACTGGAAAAACCTGCAG
CTGAGCGGACTGATCTGCGGAGGGCTCTGCCATTGCTGGATCGGGCAGTCTGAGTGG
CAAATGCAAATACAAGAGCAGCCAGAAGCAGCACAGTCCTGTACCTGAGAAGGCCATCCAC
TCATCACTCCAGGCTCTGCCACTACTTGCTTGAGCACAGGACTGGCCTCCAGGGATGGCCTGA
AGCCTAACACTGGCCCCCAGCACCTCCTCCCCTGGGAGGCCTTATCCTCAAGGAAGGACTTC
TCTCCAAGGGCAGGCTGTTAGGCCCTTCTGATCAGGAGGCTTCTTATGAATTAAACTCG
CCCCACCACCCCTCA

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FIGURE 180

MERVTLALLLAGLTALLEANDPFANKDDPFYYDWKNLQLSGLICGGLAIAGIAAVLSGKCK
YKSSQKQHSPVPEKAIPLITPGSATTC

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FIGURE 181

GGAGAAGAGGTTGTGGACAAGCTGCTCCGACAGAAGGATGTCGCTGCTGAGCCTGCC
TGGCTGGGCCTCAGACCGGTGGCAATGTCCCCATGGCTACTCCTGCTGCTGGTTGTGGCTC
CTGGCTACTCGCCCGCATCCTGGCTTGGACCTATGCCCTCTATAACAACGCCGGCTCC
AGTGTTCACAGCCCCAAACGGAACGGTTGGGGTCACCTGGCCTGATCACTCCT
ACAGAGGAGGGCTTGAAGGACTCGACCCAGATGTCGCCACCTATTCCAGGGCTTACGGT
ATGGCTGGTCCCCTCATCCCCTCATCGTTTATGCCACCTGACACCATCCGGTCTATCA
CCAATGCCTCAGCTGCCATTGCACCCAAGGATAATCTCTTCATCAGGTTCTGAAGCCCTGG
CTGGGAGAAGGGATACTGCTGAGTGGCGGTGACAAGTGGAGGCCACCGTCGGATGCTGAC
GCCCGCCTCCATTCAACATCCTGAAGTCCTATATAACGATCTTCAACAAGAGTGCAAACA
TCATGCTTGACAAGTGGCAGCACCTGGCCTCAGAGGGCAGCAGTCGTTGGACATGTTGAG
CACATCAGCCTCATGACCTTGGACAGTCTACAGAAATGCATCTCAGCTTGACAGCCATTG
TCAGGAGAGGCCAGTGAATATATTGCCACCATCTGGAGCTAGTGCCTTGTAGAGAAAA
GAAGCCAGCATATCCTCCAGCACATGGACTTCTGTATTACCTCTCCATGACGGCGGC
TTCCACAGGGCCTGCCGCTGGTCATGACTTCACAGACGCTGTATCCGGAGCGCGCTCG
CACCCCTCCACTCAGGTATTGATGATTTTCAAAGACAAAGCCAAGTCCAAGACTTGG
ATTTCATTGATGTGCTCTGCTGAGCAAGGATGAAGATGGAAAGGCATTGTCAGATGAGGAT
ATAAGAGCAGAGGCTGACACCTTCATGTTGGAGGCCATGACACCACGCCAGTGGCTCTC
CTGGGTCTGTACAACCTTGCAGGGCACCCAGAATACCAAGGAGCGCTGCCACAGGAGGTGC
AAGAGCTTCTGAAGGACCGCGATCCTAAAGAGATTGAATGGACGACCTGGCCAGCTGCC
TTCCTGACCATGTGCGTGAAGGAGAGCCTGAGGTTACATCCCCAGCTCCCTCATCTCCG
ATGCTGCACCCAGGACATTGTTCTCCAGATGGCCAGTCATCCCCAAAGGCATTACCTGCC
TCATCGATATTATAGGGTCCATCACAAACCAACTGTGTGGCCGGATCCTGAGGTCTACGAC
CCCTTCCGCTTGACCCAGAGAACAGCAAGGGAGGTACCTCTGGCTTTATTCTTCTC
CGCAGGGCCCAGGAACCGCATGGCAGGGCTCGCCATGGCGGAGATGAAAGTGGCTCTGG
CGTTGATGCTGCTGCACCTCCGGTCTGCCAGACCACACTGAGCCCCCAGGAAGCTGGAA
TTGATCATGCGCGCCGAGGGCGGGCTTGGCTGCGGGTGGAGCCCCTGAATGTAGGCTTGCA
GTGACTTCTGACCCATCCACCTGTTTTGCAGATTGTCATGAATAAACGGTGCTGTCAA

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FIGURE 182

MSLLSLPWLGRLPVAMSPWLLLLVVGSWLLARI LAWTYAFYNNCRRLQCFQPPKRNWFWG
HLGLITPTEEGLKDSTQMSATYSQGFTVWLGPPIPFIVLCHPDTIRSITNASAAIAPKDNLF
IRFLKPWLGE GILLSGGDKWSRHRMLTPAFHFNILKSYITIFNKSANIMLDKWQHLASEGS
SRLDLDFEHISLMTLDSLQKCIFSFDHCQERPSEYIATILELSALVEKRSQHILQHMDFLYY
LSHDGRRFHRACRLVHDFTDAVIRERRTLPTQGIDDFFKDKAKSKTLDFIGVLLSKDEDG
KALSDEDIRAEADTFMFGGHDTTASGLSWVLYNLRHPEYQERCRCQEVQELLKDRDPKEIEW
DDLAQLPFLTMCVKESLRLHPPAPFISRCCCTQDIVLPDGRVIPKGITCLIDIIGVHHNPTVW
PDPEVYDPFRFPENS KGRSPLAFIPFSAGPRNCIGQAFAMAEMKVVLALM LLHFRFLPDHT
EPRRKLELIMRAEGGLWLRVEPLNVGLQ

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FIGURE 183

CAACAGAAGCCAAGAAGGAAGCCGTATCTTGTGGCGATATGTATAAGCTGGCCTCCTGC
TGTTGCTTTCACAGGATTCTTAAATCCTCTCTTATCTCTTCCTCTCCTGACTCCAGGGA
AATATCCTTCAACTCTCAGCACCATGAAGACGCGCGCTTAACCTCCGGAGGAGCTAGAAA
GAGCTTCCCTTCTACAGATATTGCCAGAGATGCTGGGTGCAGAAAGAGGGGATATTCTCAGG
AAAGCAGACTCAAGTACCAACATTTAACCAAGAGGAAATTGAGAAAGTTCAAGGATT
CTCTGGACAAGATCCTAACATTTACTGAGTCATCTTGGCCAGAATCTGAAACCATA
AGAACCGTGAGACTCCTGATTGCTCTGGAAATACTGTGTTGAAGTGAATAAGCATCTGT
TAGTCAGCTCAGAAACACCCATCTAGAATATGAAAAATAACACAATGCTTGATTGAAAAC
AGTGTGGAGAAAAACTAGGCAAACACACCCTGTTATTGTTACCTGGAAAATAATCCTCT
ATGTTTGCACAAAAAAAAAAAAAA

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FIGURE 184

MYKLASCCLLFTGFLNPLSLPLLDREISFQLSAPHEDARLTPEELERASLLQILPEMLGA
ERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV

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FIGURE 185

GAACATTTAGTCCCAAGGAATGTACATCAGCCCCACGGAAGCTAGGCCACCTCTGGGAT
GGGTTGCTGGTTAAAACAAACGCCAGTCATCCTATATAAGGACCTGACAGCCACCAGGCA
CCACCTCCGCCAGGAACTGCAGGCCACCTGTCTGCAACCCAGCTGAGGCCATGCCCTCCCC
AGGGACCGTCTGCAGCCTCCTGCTCCTGGCATGCTCTGGCTGGACTTGGCATGGCAGGCT
CCAGCTTCCTGAGCCCTGAACACCAGAGAGTCCAGCAGAGAAAGGAGTCGAAGAAGCCACCA
GCCAAGCTGCAGCCCCGAGCTCTAGCAGGCTGGCTCCGCCGGAACATGGAGGTCAAGCAGA
AGGGGCAGAGGATGAACTGGAAGTCCGGTCAACGCCCTTGATGTTGGAATCAAGCTGT
CAGGGGTTCACTTACCAAGCAGCACAGCCAGGCCCTGGGAAGTTCTTCAGGACATCCTCTGG
GAAGAGGCCAAAGAGGCCAGCCGACAAGTGATCGCCACAAGCCTACTCACCTCTCT
AAGTTAGAAGCGCTCATCTGGCTTTCGCTTCTGCAGCAACTCCCACGACTGTTGTA
CAAGCTCAGGAGGCGAATAATGTTCAAACGTGA

FIGURE 186

MPSPGTVC~~S~~LLL~~G~~MLWLDLAMAGSSFLSPEHQRVQQRKESKKPPAKLQPRALAGWLRPEDG
GQAEGAEDELEVRFNAPFDVGIKLSGVQYQQHSQALGKFLQDILWEEAKEAPADKO

*190/310***FIGURE 187**

CGGCCACAGCTGGCATGCTCTGCCTGATGCCATCCTGCTGTATGTCCTCGTCCAGTACCTC
GTGAACCCCAGGGTGCCTCCGCACGGACCCAGATGTCAGAAATTGAACACGTGGCTGCTGT
TCCTCCCCCTGTTCCGGTGCAGGTGCAGACCCCTGATAGTCGTGATCATGGGATGCTCGTG
CTCCTGCTGGACTTCTTGGCTTGGTGCACCTGGGCCAGCTGCTCATCTTCCACATCTACCT
GAGTATGTCCCCCACCCTAACGCCCCGATCCCCCAAGGCTGGTGGTCAGAGCTGCTCATC
TTACACCTCTACTGAGTATGTCCTAACCTGAGCCCCCACGCCCTGGGCCAGAGTCTT
GTCCCCCGTGCATGTGTCAGGGTCAGCCTCTCCAGAAGTGAGATCATGGACAAAAA
GGGCAAATCACAGGAAGAAATTAAATCCATGAGGACCCAGCAGGCCAGCAAGAAGCTGAAC
TCACGCCGAGACCTGCAGGAGTGGTGCAGGTGCTTGAAGTAACAAGTTAAAATGTTAGA
GACAATGGAATGGAATCTATTAGGCAAGAACAGGACATTATGAAATAAGGACAGGTGGACTT
CCAAAAACACAAGTAGAAATTCTAACATGAAATATATTACAGGCAGGTACCCACTAACCA
AACAACTGAAGCGAGAGCTGTGGTCTTGGTCTCACAGTGGCACAGCGTAGGCGGTC
AGTCATGTTGCTGAACGACGGAGGGTAAACTCCCCAGCCCCAAGAAAACCTGTGGACT
AACAAACAACCTCCCTGCCTGGCACAGCCGTTGGTCATGGTGGGCCAGCTGCAAAGCG
TCTTCATTCTGGCAGGGTGTCCAGGCCAGCCCCAAGAATGCCCTGCTCCTGACAGCTGGCCA
ACGGGCAGCAGAGTGTCCAGGCCAGCCCCAAGAATGCCCTGCTCCTGACAGCTGGCCA
ACCCCTGGTCAGGGCAGAGGGAGTTGGTGGTCAGGCTCTGGCTCACCTCCATCTCCAGA
GCATCCCCGCTGCAGTTGTGGCAAGAACGCCAGCTCAGAATGAACACACCCACCAAGA
GCCTCCTGTTCATACCACAGGTTACCCCTACAAACCAACTGTCCCCACACAACCTGGGAT
GTTTTAAAACACACACCTCTAACGCATATCTTACAGTCAGTCACTGTTGTCTGCCTGAGGTTGA
ATTTTTTTAATGAAAGTGAATGAAAATCACTGGATTAAATCCTACGGACACAGAGCTGAA
AAAAAAAAAAAAAAAAAAAAAA

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FIGURE 188

MNTWLLFLPLFPVQVQTLIVVIIGMLVLLDFLGLVHLGQLLIFHIYLSMSPTLSPRS PQGW
VVRAAHLTPLLEYVPNPEPPTPGARVFVPRVRMCSGSASPRSEIMDKKGKSQEEIKSMRTQQ
AQQEAEELTPRPAGVVPGA

FIGURE 189

GGAGTGCAGATGGCATCCTCGGTTCTCCAGACAAGCTGCAAGACGCTGACCATGGCCAAG
ATGGAGCTCTCGAAGGCCCTCTCTGGCCAGCGGACACTCCTATCTGCCATCCTCAGCATGCT
ATCACTCAGCTTCTCCACAACATCCCTGCTCAGCAACTACTGGTTGTGGCACACAGAAGG
TGCCCCAAGCCCCGTGCGAGAAAGGTCTGGCAGCCAAGTGCTTGACATGCCAGTGTCCCTG
GATGGAGATAACCAACACATCCACCCAGGAGGTGGTACAATACAACACTGGGAGACTGGGATGA
CCGGTTCTCCTCCGGAGCTCCGGAGTGGCATGGCTATCCTGTGAGGAAACTGTGGAAG
AACCAAGGGAGAGGTGCCGAAGTTCAATTGAACTTACACCACAGCCAAGAGAGGGTGGAAA
GGACTACTGGAATTGCCACGTTGCAAGGCCATGTACCCCCACTCTCCGATTGGAGGGAA
GCGGTTGATGGAGAAGGCTCCCTCCCCTCCCTGGGGCTTGTGGCAAAATCCTA
TGGTTATCCCTGGGAAACGCAGATCACCTACATGGACTTCATTCAATTGAGCTTCCTCCTGCT
ACTAACAGACTTGCTACTCACTGGAACCCCTGCCTGTGGCTCAAACGTGAGCGCCTTGCTG
CTGTTCTCTGTCCTGTCAGGTCTCCCTGGGGATGGTGGCCACATGATGTATTACAAGTC
TTCCAAGCGACTGTCAACTTGGGCCAGAACAGACTGGAGACCACATGTTGGATTATGGCTG
GGCCTCTACATGGCCTGGCTCTCCTCACCTGCTGCATGGCGTCGGCTGTCAAGTGCAGCCCC
ACACGTACACCAGGATGGTGGCTCAAGTGCAAGCATAGTAAGAGCTCAAGGAAA
CCGAAC TGCC TACC ACAT CACC AT CAGT GTT CCCT CGG CGG CT GT CAAG TG CAG CCCC
CGTGGGTCTTGACCAAGCTACCACCACTGATAATCAGCCATCCACTCTGTCTTGAGG
GAGTCGACTTCACTCCGAGCTGGAAACAAGGGATTCAAAGAGGGGCCAGCCAGGAGCTG
AAAGAACAGTTAGGTATCTGTAGAGGAAGAGCAGTGTAGGAGTTAAGCGGGTTGGGA
GTAGGGCTTGAGCCCTACCTTACACGTCTGCTGATTATCAACATGTGCTTAAGCCAACATCCG
TCTCTTGAGCATGGTTTAGAGGCTACGAATAAGGCTATGAATAAGGGTTATCTTAAAGTC
CTAAGGGATTCCCTGGGTGCCACTGCTCTCTTCCATCACAGCTCCATCTGTTACCCAC
CCCACATCTCACACATCCAGAATTCCCTTACTGATAGTTCTGTGCCAGGTTCTGGGC
TAAACCATGGAGATAAAAAGAAGAGTAAAATACACTTCCCGACCTAAGGATCTGAAA

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FIGURE 190

MAKMELSKAFSGQRTLLSAILSMLSLSFSTTSLLSNYWFVGTQKVPKPLCEKGAAKCFDMP
VSLDGDTNTSTQEVVQYNWETGDDRFSFRSFRSGMWLSCEETVEEPGERCRSFIELTPPAKR
GEKGLLEFATLQGPCHPTLRFGGKRLMEKASLPSPLGLCGKNPMVI PGNADHLHRTSIHQL
PPATNRNLATHWE PCLWAQTERLCCCFLCPVRSPGDGGPHDVFTSLPSDCQLGSRRLETTCLE
LWLGLLHGLALLHLLHGVGCHHLQHVHQDGAGVQVQA

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FIGURE 191

AACTGGAAGGAAAGAAAGAAAGGTCA GCTTGGCCCAGATGTGGTTACCCCTGGTCTCCTG
TCTTTATGTCTTCTCCTCTTCTATTCTGCATCTCCCTCACTTAAGTCTCAGGCCTGTCA
GCAGCTCCTGTGGACATTGCCATCCCCTCTGGTAGCCTCAGAGCAAACAGGACAACCTATG
TTATGGATGTTCCACCAACCAGGGTAGTGGCATGGAGCACCGTAACCATCTGTGCTCTGT
GATCTCTATGACAGAGCCACTTCTCCACCTCTGAAATGTTCCCTGCTCTGAAATCTGGCATG
AGATGGCACAGGGTGACCACGCAGAAGCCACCAGAATCTTGCTGCCCTATTCCCTCCCAA
GTCTGTTCTCTTATTGTCACCTCAGCACAAACAGGCTGGGCCAATGGCATTACAGAGAAAG
CAATCTGTGTGGCTAGTGGCAGATTACCATGCAAGCCCCAGGAGAAATGGAGGAGCTTGT
AGCCACCTCCCTGTCAGCCAGTATTAACATGTCCTCCCTGCCCGCCGTAGATTCA
GACATTGCCCTGTGTGCCACCAAACCAGGACTTCCCTGGCTTGGCATCCCTGGCTCT
CTCCTGGTACCCAGCAAGACGTCTGTTCCAGGGCAGTGTAGCATCTTCAAGCTCCGTTACT
ATGGCGATGGCCATGATGTTACAATCCCACCTGCCTGAATAATCAAGTGGAAAGGGAAAGCA
GAGGGAAATGGGCCATGTGAATGCAGCTGCTCTGTTCTCCCTACCCCTGAGGAAAAACCAA
GGGAAGCAACAGGAACCTCTGCAACTGGTTTTATCGAAAGATCATCCTGCCTGCAGATGC
TGTTGAAGGGCACAAGAAATGTAGCTGGAGAAGATTGATGAAAGTGCAGGTGTGAAGGAA
ATAGAACAGTCTGCTGGAGTCAGACCTGGAATTCTGATTCCAAACTCTTATTACTTGG
AAGTCACTCAGCCTCCCCGTAGCCATCTCCAGGGTACGGAACCCAGTGTATTACCTGCTGG
AACCAAGGAAACTAACATGTAGGTTACTAGTGAATACCCAATGGTTCTCCAATTATGCC
CATGCCACCAAAACAATAAAACAAAATTCTCTAACACTGAAA

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FIGURE 192

MWLPLGLLSLCLSPLPILSSPSLKSQACQQLLWTLPSPLVAFRANRTTYVMDVSTNQGSGME
HRNHLCFCDLYDRATSPPLKCSLL

FIGURE 193

GTAGCGCGTCTGGTCTCCGGCTGCCGCTGCCGCCGCTCGGGCTGGAGCCA
 GGAGCGACGTACCGCCATGGCAGGCATCAAAGCTTGATTAGTTGTCCTTGGAGGAGCA
 ATCGGACTGATTTGATGCTGGATGCCCTCCAATATAACAACAAACTGGCCCT
 CTTTGTCTATTTTACATCCTTCACCTATTCCATACTGCATAGCAAGAAGATTAGTGG
 ATGATACAGATGCTATGAGTAACGCTTGAAGGAACCTGCCATCTTCTACAACGGGCATT
 GTCGTGTCAGCTTGACTCCCTATTGTATTGCCAGAGCACATCTGATTGAGTGGGAGC
 TTGTGCACCTGTTCTCACAGGAAACACAGTCATCTTGCACACTATACTAGGCTTTCTGG
 TCTTGGAAAGCAATGACGACTTCAGCTGGCAGCAGTGGTGAAAAGAAATTACTGAACATTG
 TCAAATGGACTCCTGTCATTGTTGCCATTCAAGCACACAGGAGATGGGCAGTTAATGC
 TGAATGGTATAGCAAGCCTTGGGGTATTTAGGTGCTCCCTCTCACTTTATTGTAAG
 CATACTATTTACAGAGACTGCTGAAGGATAAAAGGATTTCTCTTTGGAAAAGCTTG
 ACTGATTTCACACTATCTATAGTATGCTTTGTGGTGTCTGCTGAATTAAATATTAT
 GTGTTTCTCTGTTAGGTTAGTTAGGAATCAGAATTCCGCCGGCTCTATTACTGGTCAAGTACA
 TCTTTCTCTAAAATTATTTAGCCTCATTATTACAAAAAATTATAAAAATAAGTTTCAG
 TCAGTCAGGATGACATCACTCCAAATGTTATGCAGACATACAGACGGTGGCATACGTTATA
 GACTGTATACTCAGTCAAATATAGCTGCATTACCTCAGAGGGCCAAGTGTAAATGCC
 CATGCCCTCCGTTAAGGGTGTGGTTACTGGTAGACAGATGTTGTGGATTGAAAATT
 ATTTATGGAATTGCTACAGAGGAGTGTCTTCTCTCAATTGTTAGAAGAATTATGTTAA
 ACTTTAAGGTAAGGGTGTAAAACATTGAGATAAGGTTTATTTATGTTATTATTGT
 TAGAGTGAGTTGCAATGTGGAGAAAATGACATTGAAATTCCAGTTTGAATCCTGTTCT
 ATTTATAAGTGAATTGATCTCCTATCAACCTTCTGTTACCTGTTAAAATGGAC
 ATACATGGAACCACACTGATGAGGGACAGTTGTATGTTGCATCATATATGCCAGAAAACC
 TTCCTCTGCTTCCCTTGTACTTACGGTATGTTGATATATTACATAAAATACTTT
 CAAATATAGTTAATAACACTTAGAAGTGTACTACCTGAAAATAATTGCTATGCCGTA
 CATTAGAGTCCCCCTCCCTGCAAGGCCTGCCATGATTAAACAAGTAACCTGTTAGTCTT
 ACAGATAATTGATGCAATTACAGTTAAGATTAGACATGGTAATAGTAGTTCTTATTCTC
 TAAGGTTATATCATATGTAATTAAAAGTATTTAAGACAAGTTCTGTATACCTCTGAA
 CTGTTTGATTGAGTTGATCATGATGAGATCTGCTGTTCTTATAAAAGGCATTGTTGT
 GTGAGTTAATGCAAAGTAGCCAAGTCCAGCTATAGCAGCTCAGAACACACTGACCAA
 AAAATTCCCAGTAACCAGGCATGATCAATTATAGGGTGTGTTACATCTAATAATTATCAG
 GACTTTTCAGGAGTGGTTATAAAAACATTCAAGTTGCTGACAGTATTTGTTAAGGA
 TATTGTTGTTGTTGAGATGTTACTACATAAAATTATTCGCCATGCCAAACT
 CAGTAATCATGACAGCTGTCTGTTATGAAGTTATTCTCAAGAAAATGGAAATAAA
 TTTGGGATTGTTGAGCTTTACTAAAGATGCCAAAGGTTTATTGCTTAACT
 TAAGCCATGACTTTAGATATGAGATGACGGGAAGCAGGACGAAATATCGCGTGTGGCTGG
 AGCCTCCCACTGGAGGCTGAAAGTGGCTGTTATTATAATGTTGAGATTTCAAGAGGAA
 GGTGCAGGTACACATGAGTTAGAGAGCTGGTAGAGACAGTTGGAACTCTTGTGCTGTGAT
 CTACTGGACTTTTGTGAGGACTGCAATTCTGCTGCTTCCCTATTCTGTTCTGGA
 TGTCAGTGCAGTGCAGTGCATTGTTATCCACTGGCCACAGACTTTCTAACAGCTGC
 GTATTATTCTATATACTAATTGATGCTGGAGGACTGTTGAGATGAAATTCCATAGAATAT
 GACATAGTGCTGCTCTGATTCTAGGCTAGTTACTGAGATGAAATTCCATAGAATAT
 GCACTGATACAACATTACCAATTCTATGGAAAGAAAATTGATGAAACAATAAAAG
 ATTTAAATATCTATTAAAAAA

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FIGURE 194

MAGIKALISLSFGGAIGLMFLMLGCALPIYNKYWPLFVLFFYILSPIPYCIARRLVDDTDAM
SNACKELAIFLTTGIVVSAGLPVFARAHLIEWGACALVLTGNTVIFATILGFFLVFGSND
DFSWQQW

FIGURE 195A

CCCACCGCGTCCGCCAACCGCGTCCGCCAACCGCGTCCGCCAACCGCGTCCGCC
 CACCGCGTCCGCCAACCGCGTCCGGTCAAGCTCGCGCCGACACTGCCTGGAGGGAAAGGA
 GCCCGGGCGCCTCTCGCCGCTCCCCCGCGCCGTCGCACCTCCCCACCGCCGCCGCCG
 CGCCCGCCGCCGCAAAGCATGAGTGAGCCGCTCTGCAGCTGCCGGGGCGGAATGG
 CAGGCTGTTCCCGGGAGTAAAAGGTGGCGCCGGTCACTGGTCGTTCCAATGACGGACATT
 AACCAAGACTGTCAAGATCTGGGAGTCAGGAGCCCAGTTGGAGTTTTCCCCCACAA
 CGTCACAGTCGAACTGCAGAGGGAAAGGAAGGCAGGAAGGCGAAGCTCGGGCTCCGGC
 ACGTAGTTGGAAACTTGCGGGTCTAGAAGTCGCTCCCCGCTTGCAGGCGCCCTGCA
 GCCCGAGCCGAGCAGCAAAGTGAGACATTGTGCAGCTGCCAGATCCGCCGGCGGACCG
 GGGCTGCCTCGAAACACAGAGGGTCTCTCGCCCTGCATATAATTAGCCTGCACACAA
 AGGGAGCAGCTGAATGGAGGTTGCACTCTGGAAAAGGATTCTGACCGAGCGCTTCAA
 TGGACATTCTCCAGTCTCTGGAAAAGATTCTCGCTA**ATGG**ATTTCCTGCTGCTCGGTCT
 GTCTATACTGGCTGCTGAGGAGGCCCTCGGGGTGGTCTTGTGTCGTCGTCGGGCTGCTT
 CAGATGCTGCCGCCGCCAGCGGGTGCAGCTGTGCAGGCGTGCAGGGGCGGCTGCT
 GTACTGCGAGGCCTCAACCTCACCGAGGCAGGCCACAACCTGTCCGGCTGCTGGCTTGT
 CCCTGCGCTACAACAGCCTCTCGAGCTGCGGCCAGTTACGGGTTAATGCAGCTC
 ACCTGGCTCTATCTGGATCACAATCACATCTGCTCCGTGCAGGGGACGCCCTTCAGAAACT
 GCGCCGAGTTAAGGAACCTACGCTGAGTTCAACCAGATCACCCAACTGCCAACACACCT
 TCCGGCCCATGCCAACCTGCGCAGCGTGGACCTCTCGTACAACAAGCTGCAGGCCTCGCG
 CCCGACCTTCCACGGCTGCGGAAGCTCACACGCTGCATATGCGGGCAACGCCATCCA
 GTTGTGCCGTGCGCATCTCCAGGACTGCCAGCCTCAAGTTCTGACATCGGATAACA
 ATCAGCTCAAGAGTCTGGCGCGCAACTCTTCGCCCCCTGTTAAGCTCACCGAGCTGAC
 CTCGAGCACACGACTTGGTAAGGTGAACCTCGCCACTTCCCGCCCTCATCTCCCTGCA
 CTCGCTCGCTCGGGAGGAACAAAGGTGGCATTGTGGTCAGCTGCTGGACTGGGTTGGA
 ACCTGGAGAAAATGGACTTGTGGCAACGGAGATCGAGTACATGGAGCCCATGTGTTGAG
 ACCGTGCCGACCTGCGACTCCCTGAGCTGGACTCCAACCGCCTCACCTACATCGAGCCCG
 GATCTCAACTCTGGAAAGTCCCTGACAAGCATCACCTGGGGAACTGTGGGATTGCG
 GGCGCAACGTGTGCCCCTAGCCTCGTGGCTCAGCAACTTCCAGGGCGCTACGATGGCAAC
 TTGCACTGCGCAGCCGGAGTACGCACAGGGCGAGGACGTCTGGACGCCGTACGCCCT
 CCACCTGTGCGAGGATGGGCCAGGCCACAGGGCCACCTGCTCTGGCGTCACCAACC
 GCAGTGATCTGGGCCCTGCCAGCTGCCACCGCTCGGGACGGCGGGAGGGCAG
 CACGACGGCACATTGAGCCTGCCACCGTGGCTTCCAGGGCGAGCACGCCAGAAC
 CGTCAGATCCACAAGGTGGTCAGGGCACCATGGCCCTCATCTTCTCTCATCGTGG
 TCCTGGTGTCTACGTGCTGGAGTGTGTTCCAGCCAGCCTCAGGAGCTCAGACAGTGC
 TTTGTACGCGAGCGAGAACAGAACAGACCATGCACTCAGATGGCTGCCATGTC
 TGCCAGGAATACTACGTTGATTACAAACGAACCACATTGAGGGAGCCCTGGTATCATCA
 ACGAGTATGGCTCGTGTACCTGCCACCGAGCCCGAGGGAAATGCGAGGTG**AT**TGTC
 CAGTGGCTCTCAACCCATGCGCTACCAAATACGCCTGGCAGCCGGACGGCCGGGGCA
 CCAGGCTGGGTCTCCTGTCTGTGCTCTGATATGCTCTTGACTGAAACTTTAAGGGATC
 TCTCCAGAGACTTGACATTTAGCTTATTGTGCTTAAACAAAAGCAATTAAACAC
 AACAAAAAAACCCACCCACAACCTCAGGACAGTCTATCTTAAATTCAATGAGAACTCC
 TTCCCTCTTGAAGATCTGTCATATTCAAGGAATCTGAGAGTGTAAAAAAGGTGGCCATAA
 GACAGAGAGAGATAATCGTGTGTTATGCTACTCCTCCCACCCCTGCCATGATTAAA
 CATCATGTATGAGAGATCTTAAGTCATACGCATTCTCATGAAGAACCATGGAAAGAGGA
 ATCTGCAATCTGGGAGCTTAAGAGCAAATGATGACCATAGAAAGCTATGTTCTTACTTG
 TGTGTGTCTGTATGTTCTGCGTGTGTTGTAGGCAAGCAAACGTTGTCTACACAAA
 CGGAATTAGTCACATCATTGATGCCCTGTGCCTCTAGCTCTGGAGATTGGTGGGGGG
 AGGTGGGGGAAACGGCAGGAATAAGGGAAAGTGGTAGTTTAACTAAGGTTGTAACACT
 TGAAATCTTTCTTCTCAAATTAAATTATCTTAAGCTCAAGAAACTGCTCTGACCCCTC
 TAAGCAAACACTAAGCATTAAAAGAGAACTAATTAAAGGTGTAGCACCTTTTT
 TATTCTCCCACAGAGGGTCTAATCTCATTATGCTGTGCTATCTGAAAAGAACCTTAAGGCC
 ACAATTACGTCTCGTCTGGCATTGTGATGGATTGACCCATTGCACTACCTCCCA
 GCTGATTAAAGTTCAGCAGTGGTATTGAGGTTTCTGAATATTATAGAAAAAAAGTCTT
 TTCACATGACAAATGACACTCTCACACCAGTCTAGCCCTAGTAGTTTTAGGTTGGACCA
 GAGGAAGCAGGTTAAATGAGACCTGTCCTGCTGCACTCAGAAAAAATAGGCAGTCCCTGA
 TGCTCAGATCTTAGCCTGATATTAAATAGTTGAGACCCACCAATGCAGCCTATACT
 CCCAAGACTACAAAGTTACCATCGCAAAGGAAAGGTTATTCCAGTAAAGGAAATAGTTTC
 TCAACCATTAAAATATTCTGAACTCATCAAAGTAGAAGAGCCCCAACCTTTCTCT
 CTGCCTCAAGAAGGCAGACATTGGTATGATTAGCATCAACACACATTATGAGTATAT

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FIGURE 195B

GTAAGTAATCAGAGGGCAAATGCCACTTGTATTCCCTCCAAGTTCCAAGCAAGTACAC
ACAGATCTCTGGTAGGATTAGGGCCACTGTGTTCCGGCTTATTTAGTCGACTTGTCA
CAAGTTGATGCCTAGTCTATCGACATGGCCCAGTAGAACAGGGCATTGATGGATCACATG
AGATGGTAGAAGGAACATCATCACATACCCCTCTCACAGAGAAAATTATCAAAGAACAGAA
ATTATATCTGTTGGAGCAAGAGTGTATAATGTTCAGGGTAGTCAAAATAAACATAAAT
TATCTCCTCTAGATGAGTGGCGATGTTGGCTGATTGGGTCTGCCATTGACAGAATGTCAAA
TAAAAAGGAATTAGCTAGAATATGACCATTAAATGTGCTTCTGAAATATATTTGAGATAGG
TTAGAATGTCA

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FIGURE 196

MDFLLGLCLYWLLRRPSGVVLCLLGACFQMLPAAPSGCPQLCRCEGRLLYCEALNLTEAPH
NLSGLLGLSLRYNSLSELRAGQFTGLMQLTWLYLDHHNHCsvQGDAFQKLRRVKELTLSNNQ
ITQLPNTTFRPMPNLRSDLSYNKLQALAPDLFHGLRKLTTLHMRANAIQFVPVRIFQDCRS
LKFLDIGYNQLKSLARNSFAGLFKLTELHLEHNDLVKVNFAHFPRLIISLHSLCLRRNKVAIV
VSSLDWVNLEKMDLSGNIEIYMEPHVFETVPHLQLDSNRLTYIEPRILNWSWKS LTSIT
LAGNLWDCGRNVCALASWLSNFQGRYDGNLQCASPEYAQGEDVLDAVYAFHLCEDGAEPTSG
HLLSAVTNRSDLGPPASSATTLADGGEQHDGTFEPATVALPGGEHAENAVQIHKVVTGTMA
LIFSFLIVVLVLYVSWKCFPASLRQLRQCFVTQRRKQKQKQTMHQMAAMSAQEYYVDYKPNH
IEGALVIINEYGSCCTCHQQPARECEV

*e01/310***FIGURE 197**

GTGCAAGGAGCCGAGGCGAGATGGCGTCCTGGCCGGTCTGCTGTGGCTGCAGCTCTGC
GCACTGACCCAGGCGGTCTCAAACACTGGTCCCCAACACGGACTTCGACGTGCAGCAA
CTGGAGCCAGAACCGGACCCGTGCGCCGGCGCCGTTGAGTTCCCGCGGACAAGATGG
TGTCAGTCCTGGTGCAAGAAGGTACGCCGTCTCAGACATGCTCCTGCCGCTGGATGGGAA
CTCGTCCTGGCTTCAGGAGCCGGATTGGCGTCTCAGACGTGGGCTCGCACCTGGACTGTGG
CGCGGGCGAACCTGCCGTCTTCCGCAGCATCTGACCCTCTGGCATGACCCGCACCTGT
GGCGCTCTGGGACGAGGCACCTGGCCTCTTCTCGTGGACGCCGAGCGCGTGCCTGCCGC
CACGACGACGTCTTCTTCCGCCTAGTGCCCTCTTCCCGTGGGGCTGGCCCTGGCGTAG
CCCCGTGCGTGTCCGCAGCATCTGGCTCTGGCCGGACGTTACGCGCGACGAGGACCTGG
CTGTTTCTGGCGTCCCGCGGGCCCTACGCTTCCACGGGCCGGCGCGGAGCG
GGCCCCGAGGACTGCGCGAACCGTGGCTGCGTCTGGCAACGCGGAGGCGCAGCCGTG
GATCTGCGCGGCCCTGCTCCAGCCCCT

FIGURE 198

MGVLGRVLLWLQLCALTQAVSKLWVPNTDFDVAANWSQNRTPCAGGAVEFPADKMVSVLVQE
GHAVSDMLLPLDGEVLASGAGFGVSDVGSHLDCGAGEPAVFRDRFSWHDPHLWRSGDEA
PGLFFVDAERVPCRHDDVFFPPSASFRVGLPGASPVRVRSISALGRTFTRDEDLAVFLASR
AGRLRFHGPVGALSVGPEDCADPSGCVCNAEAQPWIACAALLQP

FIGURE 199

FIGURE 200

MGPVKQLKRMFEPTRLIATIMVLLCFALTLCASFWWHNKGALIFCILQSLALTWYSLSFIP
FARDAVKKCFAVCLA

FIGURE 201

TTGAGCGCAGGTGAGCTCCTGCGCGTCCGGGGCGTCCTCCAGTCACCCCTCCGCCGTTA
 CCCGCGCGCGCCCGAGGGAGTCTCCTCCAGACCCCTCCCGTGCCTCAAACATAATACG
 GACTGAACGGATCGCTGCAGGGTGGGAGAGAAAATTAGGGGGAGAAAGGACAGAGAGAGCA
 ACTACCACATCCATAGCCAGATAGATTATCTTACACTGAACGTACTTGAAA**ATGAC**
 TTCGAAATTATCTTGGTGCCTTCATACTGCTGCACTGAGTCTTCACCAACCTTTCTC
 TCCAACTAGACCAGCAAAAGGTTCTACTAGTTCTTGATGGATTCCGGTGGGATTACTTA
 TATAAAGTTCCAACGCCCATTTCATTATATTGAAATATGGTGTTCACGTGAAGCAAGT
 TACTAATGTTTTATTACAAAAACCTACCCCTAACCAATTATACTTGGTAACGGCCTTTG
 CAGAGAATCATGGGATTGTCATGGGAGGACATACAGTGGTGAGCCATGTGGCCGGAACAGATGTA
 AAACCGAGGGCAGGACATACAGTGGTGAGCCATGTGGCCGGAACAGATGTA
 ATAAGCGCTTCCTACTCATTACATGCCTACAATGAGTCAGTTCATTTGAAGAGATAGAGTT
 GCCAAAATTGTTGAATGGTTACGTCAAAAGAGCCATAAATCTTGGTCTTCTATTGGGA
 AGACCCCTGATGACATGGGCCACCATTGGGACCTGACAGTCCGCTCATGGGCCTGTCATT
 CAGATATTGACAAGAAGTTAGGATATCTCATACAAATGCTGAAAAGGCAAAGTTGTGGAAC
 ACTCTGAACCTAATCATCACAAAGTGTACATGGAATGACGCGAGTGCTGTGAGGAAAGGTTAAT
 AGAACTTGACCAAGTACCTGGATAAAAGACCACTATACCCCTGATTGATCAATCTCCAGTAGCAG
 CCATCTGCCAAAAGAAGGTAATTGATGAAAGTCTATGAAGCACTAACGCTCATCCT
 AATCTTACTGTTACAAAAAAGAAGACGTTCCAGAAAGGTTGGCATTACAAATACAACAGTCG
 AATTCAACCAATCATAGCAGTGGCTGATGAAGGGTGGCACATTACAGAATAAGTCAGATG
 ACTTTCTGTTAGGCAACCACGGTTACGATAATGCGTTAGCAGATATGCATCCAATT
 GCCCATGGTCCTGCCCTCAGAAAGAATTCTCAAAAGAAGCCATGAACCTCACAGATTGTA
 CCCACTACTATGCCACCTCCTCAATATCACTGCCATGCCACACAATGGATCATTCTGGAATG
 TCCAGGATCTGCTCAATTCAAGCAGGAGGTGGCCCTTATACACAGAGTACTAC
 CTCCCTGGTAGTGTAAACCAGCAGAAATATGACCAAGAGGGTCATACCCATT
 GGTCTCTCTGGCAGCATTATAGTGTATTGTAATTTCATTAAGCATTAAATT
 ACAGTCAAATACCTGCCTACAAGATATGCATGCTGAAATAGCTAACCAATT
 TAAGCC
TAATGTTACTTGAAGTGGATTGCATATTGAAGTGGAGATTCCATAATTATGTCA
 GTT
 AAAGGTTCAAATTCTGGAAACCAGTTCCAAACATCTGCAGAAACCATTAAAGCAGTTACAT
 ATTTAGGTATACACACACACACACACACACACACACACACGGACCAAAACTTACAC
 CTGCAAAGGAATAAGATGTGAGAGTATGTCTCCATTGTCAGTAGCATAGGGATAGATA
 AGATCCTGCTTATTGACTTGGCGCAGATAATGTATATATTGCAACTTGCAC
 ATG
 AAAGTACCTTATATATTGCACTTAAATTCTCTCTGATGGGTACTTTAATTGAAATGCA
 CTTATGGACAGTTATGTCTTATAACTGATTGAAATGACAACCTTGCACCATGTCAC
 AGAATACTTGTACGCATTGTCAGGAAATTCTAATAATCCGAATAATGAACA
 TAGAAATCTATCTCCATAAAATTGAGAGAAGAAGAAGGTGATAAGTGTGAAAATTAAATGTG
 ATAACCTTGAACCTTGAATTGGAGATGTATTCCAAACAGCAGAACATGCA
 ACTGTGGGCAT
 TTCTGTCTTATTCTTCCAGAGAACGTGGTTTCATTATTCCCTCAAAGAGAGTC
 AAATACTGACAGATTGCTCTAAATATATTGTTCTGTCTGATAAAATTATTGTGATT
 TGAGTCATATTACTGTGATTTCATAATAATGAAGACACCATGAAATATAC
 ATTCTTCTTCTTGTGTT
 TAGTCAGCAATGGCCTGAATAGAAGCAACCAGGCACCATCTCAGCA
 ATGTTCTTCTTGTGTT
 TGTAATTATTGCTCCTTGAAAATTAAATCACTATTACATTAAATTACATT
 AAAAATCAAATTGGGAT
 AAAAAA

FIGURE 202

MTSKFILVSFILAALSLSTTFSLQLDQQKVLLVSDGFRWDYLYKVPTPHFYIMKYGVHVK
QVTNVFITKTYPNHYTLVTGLFAENHGIVANDMFDPIRNKSFSLDHMNIYDSKFWEETPIW
ITNQRAGHTSGAAMWPGBTDVKIHKRFPTHYMPYNESVSFEDRVAKIVEWFTSKEPINLGLLY
WEDPDDMGHHLGPDSPLMGPVISIDKKLGYLIQMLKKAKLWNTLNLIITSDHGMTQCSEER
LIELDQYLDKDHYTLIDQSPVAAILPKEGKFDEVYEALTHAHPNLTVYKKEDVPERWHYKYN
SRIQPPIAVADEGWHLQNKSDDFLLGNHGYDNALADMHPIFLAHGPFRKNFSKEAMNSTD
LYPLLCHLLNITAMPHNGSFWNVQDLLNSAMPRVVPTQSTILLPGSVKPAEYDQEGSYPYF
IGVSLGSIIIVIVFFVIFIKHЛИHSQIPALQDMHAEIAQPLLQA

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GGATTTGTGATCCCGATTGCTCCCACGGCGGGACCTTGTAAGTGCAGGGAGGCCAG
GACAGGCCACCCCTGCAGGGCGGGAGGCAGCCGGGTGAGGGAGGTGAAGAAACCAAGACGC
AGAGAGGCCAACAGCCCTGCCTGGTCACACAGCAAAGGAGGCAGAGCCAGAACTCACAA
CCAGATCCAGAGGCAACAGGGAC**ATG**GCCACCTGGACGAAAAGGCAGTCACCCGAGGGCC
AAGGTGGCTCCGCTGAGAGGATGAGCAAGTTCTTAAGGCACCCACGGTCGTGGAGACGA
CTACCAGCCTGGAACATCAACTACAAGAAATGGGAGAATGAAGAGGAGGAGGAGGAGG
AGCAGCCACCACCCACACCAGTCTCAGGCAGGAAGGCAGAGCTGCAGCCCTGACGTTGCC
CCTGCCCTGGCCCCGACCCAGGGCCCCCTGACTTCAGGGCATGTTGAGGAAACTGTT
CAGCTCCACAGGTTCAAGTCATCATCTGCTTGGTGGTCTGGATGCCCTCTGGTGC
TTGCTGAGCTCATCCTGGACCTGAAGATCATCCAGCCGACAAGAAATAACTATGCTGCCATG
GTATTCCACTACATGAGCATCACCATCTGGTCTTTTATGATGGAGATCATTTAAATT
ATTTGTCTTCCGCCTGAGTTCTTCACCACAAGTTGAGATCCTGGATGCCCGTGGTGG
TGGTCTCATTCATCCTGGACATTGTCCTCTGTTCCAGGAGCACCAGTTGAGGCTCTGGC
CTGCTGATTCTGCTCCGGCTGTGGCGGGTGGCCCGATCATCAATGGGATTATCATCTCAGT
TAAGACACGTTAGAACGGCAACTCTTAAGGTTAAAACAGATGAATGTACAATTGGCCGCCA
AGATTCAACACCTTGAGTTAGCTGCTCTGAGAAGCCCTGGAC**TGAT**GAGTTGCTGTATC
AACCTGTAAGGAGAAGCTCTCCGGATGGCTATGGGAATGAAAGAATCCGACTTCTACTCT
CACACAGCCACCGTGAAAGTCTGGAGTAAATGTGCTGTGTACAGAAGAGAGAGAAGGAAG
CAGGCTGGCATGTTCACTGGCTGGTGTACGACAGAGAACCTGACAGTCAGTGGCCAGTTA
TCACCTCAGATTACAAATCACACAGAGCATCTGCCTGTTCAATCACAAGAGAACAAACC
AAAATCTATAAGATATTCTGAAAATATGACAGAAATTGACAAATAAAAGCATAACGTGTA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 204

MATWDEKAVTRRAKVAPAERMSKFLRHFTVVGDDYHAWNINYKKWENE~~EEEEEEQPPPTPV~~
SGEEGRAAAPDVAPAPGPAPRAPLDFRGMLRKLFS~~SHRFQVI~~ I I CLVVLDALLVLAELILDL
KIIQPDKNYAAMVFHYMSITILVFFMMEI I FKLFVFR~~LSSFT~~LSRWMPVVVVVS~~FILD~~I
VLLFQEHQFEALGLLILLRLWRVARI INGIIISVKTRSERQLLRLKQMNVQLAAKIQHLEFS
CSEKPLD

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CGGCTCGAGCTCGAGCCGAATCGGCTCGAGGGCAGTGGAGCACCCAGCAGGCCAAC**AT**
GCTCTGTCTGTGCCTGTACGTGCCGGTCATCGGGGAAGCCCAGACCGAGTTCCAGTA
 AGTCGAAGGGGCTCCCTGCCAGCTGAAGTCATTTCAGTCAGTGTCTTCATCCCCCTCC
 CAGGAATTCTCACCTACGCCAGTGGAAAGCAGAAAATTGTACAAGCTGGAGATAAGGACCT
 TGATGGCAGCTAGACTTGAAGAATTGTGTCATTATCTCAAGATCATGAGAAGAAGCTGA
 GGCTGGTGTAAAGATTGTGACAAAAGAATGATGGACGCATTGACCGCAGGAGATCATG
 CAGTCCTGCCGGACTTGGAGTCAGAAGATATCTGAACAGCAGGAGAAAATTCTCAAGAG
 CATGGATAAAAACGGCAGTCAGGATCGACTGGAAAGCAGTGGAGAGACTACCACCTCC
 ACCCGTGGAAAACATCCCCGAGATCATCCTCTACTGGAAAGCATTCCACGATCTTGATGTG
 GGTGAGAATCTAACGGTCCCCGATGAGTCACAGTGGAGGAGAGGAGACGGGATGTGGT
 GAGACACCTGGTGGCAGGAGGTGGGCAGGGGCCGTATCCAGAACCTGCACGGCCCCCTGG
 ACAGGCTCAAGGTGCTCATGCAGGTCCATGCCCTCCGCAGCAACAAACATGGCATTGTTGGT
 GGCTTCACTCAGATGATTGAGAAGGGCCAGGTCACTCTGGGGGGCAATGGCATCAA
 CGTCCTCAAATTGCCCGAATCAGCCATCAAATTATGGCCTATGAGCAGATCAAGGCC
 TTGTTGGTAGTGACCAGGAGACTCTGAGGATTCACGAGAGGCTTGTGGCAGGGCCTTGGCA
 GGGGCCATGCCAGAGCAGCATCTACCCAATGGAGGTCTGAAGACCCGGATGGCCTGGCG
 GAAGACAGGCCAGTACTCAGGAATGCTGGACTGCCAGGAGATCTGGCCAGAGAGGGGG
 TGGCCGCTTCTACAAAGGCTATGTCCCCAACATGCTGGCATTATCCCCTATGCCGCATC
 GACCTGCAGTCTACGAGACGCTCAAGAAATGCCCTGGCTGCAGCACTATGCAGTGAAAGCGC
 GGACCCGGCGTGTGGCTCTGGCCTGTGGCACCAGTCCAGTACCTGTGGCCAGCTGG
 CCAGCTACCCCTGCCCTAGTCAGGACCCGGATGCCAGGCGAAGCCTTATTGAGGGCGCT
 CCGGAGGTGACCAGTCAGCAGCCTTCAAACATATCCTGCCGACCGAGGGGCCCTCGGGCT
 GTACAGGGGCTGCCCTAACATTCTCATGAAGGTACCTGGCAGTGTGAGCATCAGCTACGTGG
 TCTACGAGAACCTGAAGATCACCCCTGGCGTGCACTCGCGGT**GA**CGGGGGAGGGGCCCG
 GCAGTGGACTCGCTGATCCTGGCCGCAGCCTGGGTGTGCAGGCCATCTCATTCTGTGAATG
 TGCCAAACACTAAAGCTGTCTCGAGCCAAGCTGTGAAAACCTAGACGCACCCGAGGGAGGGT
 GGGGAGAGCTGGCAGGCCAGGGCTTGTCTGCTGACCCCAGCAGACCCCTCTGGTGTCC
 AGCGAAGACCAACAGGCATTCTTAGGGTCCAGGGTCAGCAGGCTCCGGGCTCACATGTGTAA
 GGACAGGACATTTCCTGCAGTGCCTGCCAATAGTGAAGCTGGAGCCTGGAGGCCGTTAGT
 TCTTCATTTACCCTTGCAAGCAGCTGTGGCCACGGCCCTGCCCTCTGGCTGCCGTGC
 ATCTCCCTGTGCCCTTGTCTGCCCTGTCTGCTGAGGTAAAGGTGGAGGAGGGCTACAG
 CCCACATCCCACCCCTCGTCCAATCCATAATCCATGATGAAAGGTGAGGTACGTGGCCT
 CCCAGGCCTGACTTCCAACCTACAGCATTGACGCCAATTGGCTGTGAAGGAAGAGGAAAG
 GATCTGGCCTGTGGTCACTGGCATCTGAGCCCTGCTGATGGCTGGGCTCTGGGATGCT
 TGGGAGTGCAAGGGGCTGCCCTGCCCTGGCTGCACAGAAGGCAAGTGTGGGCTCA
 TGGTGTCTGAGCTGGCTGGACCCCTGTCAAGGATGGGCCACCTCAGAACCAAACACT
 TCCCCACTGTGGCATGAGGGCAGTGGAGCACCAGTGTGAGGAGGCCGAGAGCTTGT
 GTGTTCTGGGAGGGAAGGAAAGGTGTTGGAGGCCTTAATTATGGACTGTTGGAAAAGGG
 TTTTGTCCAGAAGGACAAGCCGACAAATGAGCAGCTCTGTGCTTCCAGAGGAAGACGAGG
 GAGCAGGAGCTGGCTGACTGCTCAGAGTCTGTTCTGACGCCCTGGGGTCTGTCCAACC
 CCAGCAGGGCGCAGCGGGACCAGCCCCACATTCACTGTGCACTGCTGGAACCTATT
 ATTTGTATTATTAACAGAGTTATGCTTAACATTGTTATAGATTGTTAATTAAATA
 GCTTGTCAATTCAAGTTCAATTGTTATTCTATATTATGTTCATGGTTGATTGTACCTTCCC
 AAGCCGCCAGTGGATGGAGGAGGAGGAAGGGGGCTTGGGCCGTGCAGTCACAT
 CTGTCAGAGAAATTCTTTGGACTGGAGGCAGAAAAGCGGCCAGAAGGCAGCAGCCCTG
 GCTCTTCTTGGCAGGTTGGGAAGGGCTGCCCTAGGATTTCAGGGTTGTA
 CTGGGGCGTGGAGAGAGAGGAGAACCTCAATAACCTTGAGGTGAATCCAGTTATT
 CTGCGCTGCGAGGGTTCTTATTCACTCTTCTGAAATGTCAGGCAGTGAGGTGCCCT
 CACTGTGAATTGTGGTGGCGGGGCTGGAGGAGGGTGGGGCTGGCTCGTCCCTCC
 CAGCCTCTGCTGCCCTGCTTAACAAATGCCGCCAATGGCGACCTCACGGTTGCACT
 ATTCCACCAAGAATGACCTGATGAGGAATCTCAATAGGATGCAAAGATCAATGCAAAATT
 GTTATATATGAACATATAACTGGAGTCGTCAAAAGCAAATTAGAAAGAATTGGACGTAG
 AAGTGTCAATTAAAGCAGCCTCTAATAAAGTTGTTCAAAGCTGAAAAA
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 206

MLCLCLYVPVIGEAQTEFQYFESKGLPAELKSIFKLSVFIPSQEFTSYRQWKQKIVQAGDKD
LDGQLDFEEFVHYLQDHEKKLRLVFKILDKKNDGRIDAQEIMQSLRDLGVKISEQQAEKILK
SMDKNGTMTIDWNEWRDYHLLHPVENIPEIILYWKHSTIFDVGENLTVPDEFTVEERQTGMW
WRHLVAGGGAGAVSRTCTAPLDRLKVLMQVHASRSNNMGI VGGFTQMIREGGARSLWRNGI
NVLKIAPESAIKFMAYEQIKRLVGSDQETLRIHERLVAGSLAGAIAQSSIYPMEVLKTRMAL
RKTGQYSGMLDCARRILAREGVAAFYKGYVPNMLGIIPYAGIDLAVYETLKNAWLQHYAVNS
ADPGVFVLLACGTMSSCGQLASYPLALVRTRMQAQASIEGAPEVTMSSLFKHILRTFGAFG
LYRGLAPNFMKVI PAVSISYVVYENLKITLGVQSR

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FIGURE 207

GGAAGGCAGCGCAGCTCCACTCAGCCAGTACCCAGATA CGCTGGAACCTCCCCAGCCAT
GGCTTCCCTGGGGCAGATCCTCTGGAGCATAATTAGCATCATCATTATTCTGGCTGGAG
CAATTGCACTCATCATTGGCTTGGTATTCAGGGAGACACTCCATCACAGTCACTACTGTC
GCCTCAGCTGGAACATTGGGAGGATGGAATCCTGAGCTGCACCTTGAAACCTGACATCAA
ACTTTCTGATATCGTATACAATGGCTGAAGGAAGGTGTTAGGCTTGGTCCATGAGTTCA
AAGAAGGCCAAGATGAGCTGCGAGCAGGATGAAATGTTAGGCTGAGGCCGGACAGCAGTGT
GCTGATCAAGTGATAGTTGGCAATGCCCTTGGCTGAAAAACGTGCAACTCACAGATGC
TGGCACCTACAAATGTTATCATCACTCTAAAGGCAAGGGAAATGCTAACCTTGAGTATA
AAACTGGAGCCTTCAGCATGCCGAAGTGAATGTGACTATAATGCCAGCTCAGAGACCTTG
CGGTGTGAGGCCTCCCGATGGTCCCCAGCCCACAGTGGCTGGCATCCAAGTTGACCA
GGGAGCCAACCTCTCGGAAGTCTCCAATACCAGCTTGAGCTGAACTCTGAGAAATGTGACCA
TGAAGGTTGTCTGTGCTCTACAATGTTACGATCAACAAACACATACTCCTGTATGATTGAA
AATGACATTGCCAAAGCAACAGGGATATCAAAGTGACAGAACGGAGATCAAAAGGCCAG
TCACCTACAGCTGCTAAACTCAAAGGCTCTGTGTCTCTTCTTGTGCTCAGCT
GGGCACTCTGCCCTCAGCCCTACCTGATGCTAAATAATGTGCCTGGCCACAAAAAG
CATGCAAAGTCATTGTTACAACAGGGATCTACAGAACTATTCACCACAGATATGACCTAG
TTTATATTCTGGGAGGAAATGAATTCATATCTAGAAGTCTGGAGTGAGCAAACAAGAGCA
AGAAACAAAAAGAAGCCAAAGCAGAACGGCTCAATATGAACAAGATAATCTATCTCAA
GACATATTAGAAGTTGGAAAATAATTCATGTGAACTAGACAAGTGTGTTAAGAGTGATAAG
TAAAATGCACGTGGAGACAAGTGCATCCCCAGATCTCAGGGACCTCCCCCTGCCGTACCT
GGGAGTGAGAGGACAGGATAGTCATGTTCTTGTCTGAAATTAGTTATATGTGCTG
TAATGTTGCTCTGAGGAAGCCCTGGAAAGTCTATCCAACATATCCACATCTTATATTCCA
CAAATTAAGCTGTAGTATGTACCCCTAACAGACGCTGCTAATTGACTGCCACTCGCAACTCAGG
GGCGGCTGCATTAGTAATGGGTCAAATGATTCACTTTATGATGCTTCAAAGGTGCCT
TGGCTCTCTTCCAACTGACAAATGCCAAAGTTGAGAAAAATGATCATAATTTAGCATAA
ACAGAGCAGTCGGGACACCGATTATAAATAACTGAGCACCTCTTTAAACAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 208

MASLGQILFWSSIISIIILAGAIALIIGFGISGRHSITVTTVASAGNIGEDGILSCTFEPDI
KLSDIVIQWLKEGVLGLVHEFKEGKDELSEQDEMFRGRTAVFADQVIVGNASLRKNVQLTD
AGTYKCYIITSKGKGNANLEYKTGAFSMPEVNVDYNASSETLRCEAPRWFPQPTVVWASQVD
QGANFSEVSNTSFELNSENVTMKVSVLYNVTINNTYSCMIENDIAKATGDIKVTESEIKRR
SHLQLLN SKASLCVSSFFAISWALLPLSPYLMK

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FIGURE 209

GAATTGTAGAAGACAGCGCGTGGCATGGCGCGTCTCTGGGCAGGTGTTGGCTCTGGT
GCTGGTGGCCGCTCTGTGGGTGGCACGCAGCGCTGCTGAAGCGGGCTCCGCCGGCCTGC
AGCGGGTTCATGAGCCGACCTGGGCCAGCAGTTGCTACAGGAGATGAAGACCCTTTCTG
AATACTGAGTACCTGATGCCCTTCCTCAACCAGTGTGGATCCCTCTATTACCTCAC
CTTGGCATCGACAGATCTGACCCGGCTGTGCCACTGTAACTCTCTGGCTATCATCTCA
CACTGATTGGAGGCCCTGGAGAAGATATTGGTGGAAAACGTAAGTTAGACTACTGC
GAGTGCAGGGACGCAGCTGTGGATCTGACATACTGTGTTAGTCCTCCAGAACCCAT
CTCCCCAGAGTGGGTGAGGACACGGCCTTTCCCCTCCTGCCCTTCCTCTGCAGCTGTTT
GCTTCCTTGTGGCCATCAGAGTCCCTCCCTGGACAGTCTGGAGAAAGACAGAGGCTGG
GTTTGGGATTGAAGACCAAGACCCATCTGAGCCCTCCTCCAGCCCTGTACCAAGCTCCTACT
GGCATGGCTGAGCTCAGACCCCTCCTGATTCTGCCTATTATCCAGGAGCAGTTGCTGGCAT
GGTGCTCACCGTGATAGGAATTCACTCTGCATACAAGCTCAGTGAGTAAGACCCAGGGC
AACAGTCTACCCCTTGAGTGGCCGAACCCACTCCAGCTCTGCTGCCCTCAGGAAGCCCT
GGGCCATGAAGTGCTGGCAGTGAGCGGATGGACCTAGCACTCCCTCTGGCCTTAGCTT
CCTCCTCTTTATGGGATAACAGCTACCTCATGGATCACAATAAGAGAACAGAGTGAAAG
AGTTTGTAACCTCAAGTGCTGTTCAGCTGCAGGGATTAGCACAGGAGACTCTACGCTCA
CCCTCAGCAACCTTCTGCCAGCAGCTCTCCCTGCTAACATCTCAGGCTCCAGCCA
GCCACCATTACTGTGGCCTGATCTGGACTATCATGGTGGCAGGTTCCATGGACTGCAGAACT
CCAGCTGCATGGAAAGGCCAGCTGCAGACTTGAGCCAGAAATGCAAACGGGAGGCCTCTG
GGACTCAGTCAGAGCGCTTGGCTGAATGAGGGTGGAACCGAGGGAAGAAGGTGCGTCGGA
GTGGCAGATGCAGGAAATGAGCTGTCTATTAGCCTGCCTGCCCAACCCATGAGGTAGGCAG
AAATCCTCACTGCCAGCCCTTTAAACAGGTAGAGAGCTGTGAGCCCAAGCCCCACCTGAC
TCCAGCACACCTGGCGAGTAGCTGTCAATAATCTATGAAACAGACAAAAAAAAAAAAAA
AA

FIGURE 210

MAASLGQVLALVLVAALWGGTQPLLKRASAGLQRVHEPTWAQQLQEMKTLFLNTEYLMPFL
LNQCGSLLYYLTLASTDLTLAVPICNSLAIIFTLIVGKALGEDIGGKRKLDYCECGTQLCGS
RHTCVSSFPEPISPEWVRTRPFPLQLFCFLVAIRVPFPWTVWRKTEAGVWD

*215 / 310***FIGURE 211**

CTTCTGTAGGACAGTCACCAGGCCAGATCCAGAAGCCTCTAGGCTCCAGCTTCTGTG
GAAGATGACAGCAATTATAGCAGGACCCGCCAGGCTGCGAAAAGATTCCGCAATAAAACT
TTGCCAGTGGGAAGTACCTAGTGAAACGGCTAAGATGCCACTTCTCATGTCCCAGGCT
TGAGGCCCTGTGGTCCCCATCCTTGGGAGAAGTCAGCTCCAGCACCAATGAAGGGCATCCTCG
TTGCTGGTATCACTGCAGTGCTTGCAGCTGTAGAATCTCTGAGCTGCGTGCAGTGTAAAT
TCATGGAAAAATCCTGTGCAACAGCATTGCCCTGAAATGCCCTCACATGCCAACACCAG
CTGTATCAGCTCCTCAGCCAGCTCCTCTAGAGACACCAGTCAGATTATACCAGAATATGT
TCTGCTCAGCGGAGAACACTGCAGTGAGGAGACACACATTACAGCCTTCACTGTCCACGTGTCT
GCTGAAGAACACTTCATTTGTAAGCCAGTGCTGCCAAGGAAAGGAATGCAGAACACCAG
CGATGCCCTGGACCCCTCCCTGAAGAACGTGTCCAGCAACGCAGAGTGCCCTGCTTGTATG
AATCTAATGGAACCTCCTGTCGTGGAGCCCTGGAAATGCTATGAAGAACAGTGTGTC
TTCTAGTTGCAGAACTTAAGAACATGACATTGAGTCTAACAGTCTCGTGTGAAAGGCTGTC
CAACGTCACTGCCACCTGTCAGTTCCCTGTCAGTGGTAAAACAAGACTCTGGAGGAGTCA
TCTTCGAAAGTTGAGTGTGCAAATGTAACAGCTTAACCCCCACGTCTGCACCAACCACT
TCCCACACGTGGCTCCAAAGCTTCCCTACCTCTGGCCCTGCCAGCCTCCTCTCG
GGGACTGCTGCCTGAGGTCTGGGCTGCACTTGCCAGCACCCATTCTGCTTCTCTG
AGGTCCAGAGCACCCCCCTGCGGTGCTGACACCCCTTTCCCTGCTCTGCCCGTTAACTGC
CCAGTAAGTGGAGTCACAGGTCTCCAGGCAATGCCGACAGCTGCCTTGTCTTCATTATTA
AAGCACTGGTTCATTCACTGCCAAAAAAAAAAAAAAAAAAAAAA

FIGURE 212

MKGILVAGITAVLVAAVESLSCVQ CNSWEKSCVNSIASECPSHANTSCISSSASSSLETPVR
LYQNMFC SAENCSEETHITAFTVHVS AEEHFHFV SQCCQGKECSNTSDALDPLKNVSSNAE
CPAC YESNGTSCRGKPWKC YEEEQCVFLVAELKNDIESKSLVLKGCSNVSNATCQFLSGENK
TLGGVIFRKFECANVNSLTPTSAPTTSHNVGSKASLYLLALASLLL RGLLP

*217/310***FIGURE 213**

GGCCTCGGTTCAAACGACCCGGTGGGTCTACAGCGGAAGGGAGGGAGCGAAGGTAGGAGGCA
GGGCTTGCCTCACTGGCCACCCTCCAACCCAAGAGCCCAGCCCCATGGTCCCCGCCGCC
GCGCGCTGCTGTGGTCCTGCTGCTGAATCTGGTCCCCGGCGGGGGCCCAAGGCCTG
ACCCAGACTCCGACCGAAATGCAGCGGGTCAGTTACGCTTGCCCCATGACCCGCAG
CTACCGGAGCACCGCCGGACTGGTCTTCCCCGGAAGACAAGGATAATCCTAGAGGACGAGA
ATGATGCCATGGCGACGCCGACCGCCTGGCTGGACCAGCGGCTGCCGAGCTTGGCGCC
ACGGTGTCCACCGGCTTAGCCGGTGTCCGCAATTACGAGGAGGATGGTCTTCAGAAGA
GGGGTTGTGATTAATGCCGAAAGGATAGCACCAAGCAGAGAGCTCCAGTGCAGCTCCCA
ATACAGCGGGAGTTCCAGCACGAGGTTATGCCAATAGTCAGGAGCCTGAAATCAGGCTG
ACTTCAAGCCTGCCGCGCTCCCCGGAGGTCTACTGAGGACCTGCCAGGCTCGCAGGCCAC
CCTGAGCCAGTGGTCCACACCTGGTCTACCCCGAGCCGGTGGCGTCACCCCTACCCACAG
CCATGCCATCTCCTGAGGATCTGCCGCTGGTGTGATGCCCTGGGCCGTGGCACTGCCAC
TGCAAGTCGGGACCATGAGCCGGAGCCGGTCTGGGAAGCTGCACGCCCTTCCGGCGCCT
TCGAGTTGGGCGCTGAGCCAGCTCCGCACGGAGCACAAGCCTGCACCTATCAACAATGTC
CCTGCAACCGACTCGGGAAAGAGTGCCCCCTGGACACAAGTCTCTGTACTGACACCAACTGT
GCCTCTCAGAGCACCACCAAGTACCAAGGACCACCACTACCCCTCCCCACCATCCACCTCAG
AAGCAGTCCCAGCCTGCCACCCGCCAGCCCCCTGCCAGCCCTGGCTTTGGAAACGGTCA
GGATTGGCCTGGAGGATATTGGAATAGCCTCTTCAGTGTTCACAGAGATGCAACCAATA
GACAGAAAACCAGAGGTAATGGCCACTTCATCCACATGAGGAGATGTCAGTATCTAACCTCT
CTTGCCCTTCATCCTAGCACCCACTAGATTTTAGTACAGAAAAACAAAATGGAAAA
CACAA

FIGURE 214

MVPAAGALLWVLLNLGPRAGAQGLTQTPTEMQRVSLRFGGPMTRSÝRSTARTGLPRKTRI
ILEDENDAMADADRLAGPAAAELLAATVSTGFSRSSAINEEDGSSEEGVVINAGKDSTSREL
PSATPNTAGSSSTRFIANSQEPEIRLTSSLRSPGRSTEDLPGSQATLSQWSTPGSTPSRWP
SPSPTAMPSPEDLRLVLMPWGPWHCHCKSGTMSRSRGKLHGLSGRLRVGALSQLTEHKPC
TYQQCPCNRLREECPLDTSLCDTNCASQSTTSTRTTTFPTIHLRSSPSLPPASPCPALA
FWKRVRIGLEDIWNSLSSVFTEMQPIDRNQR

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FIGURE 215

CCCGGGTCGACCCACCGTCCGGGGAGAAAGGATGCCGGCCTGGCGCGCGTTGGTCCTG
CTAGCTGGGCAGCGCGCTGGCGAGCGGCTCCAGGGCGACCGTGAGCCGGTGTACCGCGA
CTGCGTACTGCAGTGCAGAGAGCAGAACTGCTCTGGGGCGCTCTGAATCACTCCGCTCCC
GCCAGCCAATCTACATGAGTCTAGCAGGCTGGACCTGTGGACGACTGTAAGTATGAGTGT
ATGTGGGTACCCCTGGGCTCACCTCCAGGAAGGTACAAAGTGCCTCAGTCCATGGCAA
GTGGCCCTTCTCCGGTCTCTGGTCTTCAAGAGCCGCATGGCCGTGGCCTCGTTCTCA
ATGGCCTGGCCAGCCTGGTGTGATGCTCTGCCGTACCGCACCTCGTGCAGCCTCCCTCCCC
ATGTACCACACCTGTGTGGCCTCGCCTGGGTGTCCCTCAATGCATGGTCTGGTCCACAGT
CTTCCACACCAAGGGACACTGACCTCACAGAGAAAATGGACTACTCTGTGCCTCACTGTCA
TCCTACACTCAATCTACCTGTGCTGCGTCAGGACCGTGGGCTGCAGCACCCAGCTGTGGTC
AGTGCCTTCCGGCTCTCTGCTCATGCTGACCGTGCACGTCTCCTACCTGAGCCTCAT
CCGCTTCGACTATGGCTACAACCTGGTGGCCAACGTGGCTATTGGCCTGGTCAACGTGGTGT
GGTGGCTGGCCTGGTGCCTGTGGAACCAGCGCGGCTGCCTCACGTGCGCAAGTGCCTGGTGT
GTGGTCTTGCTGCTGCAGGGCTGTCCCTGCTCGAGCTGCTGACTTCCCACCGCTTTCTG
GGTCCTGGATGCCATGCCATCTGGCACATCAGCACCATCCCTGTCCACGTCCCTTTTCA
GCTTCTGGAAGATGACAGCCTGTACCTGCTGAAGGAATCAGAGGACAAGTTCAAGCTGGAC
TGAAGACCTTGGAGCGAGTCTGCCAGTGGGATCCTGCCCGCCCTGCTGGCCTCCCT
CTCCCTCAACCTTGAGATGATTCTCTTTCAACTTCTGAACTTGGACATGAAGGATG
TGGGCCAGAACATGTGGCCAGCCCACCCCTGTTGGCCCTCACAGCCTGGAGTCTGTT
CTAGGGAAGGCCTCCCAGCATTGGGACTCGAGAGTGGCAGCCCTCACCTCCTGGAGCT
GAACCTGGGTGGAAGTGTGTTCTAGCTCTACCGGGAGGACAGCTGCCTGTTCC
CCACCAAGCCTCTCCCCACATCCCCAGCTGCCTGGCTGGTCTGAAGCCCTGTCTACCT
GGGAGACCAGGGACCACAGGCTTAGGGATACAGGGGGTCCCTCTGTTACCAACCCCCAC
CCTCCTCCAGGACACCACCTAGGTGGTGTGGATGCTGTTCTTGCCAGCAAGGTTCACG
GCGATTCTCCCCATGGATCTTGAGGGACCAAGCTGCTGGATTGGAAAGGAGTTACCCCT
GACCGTTGCCCTAGCCAGGTTCCAGGAGGCTCACCATCTCCCTTCAGGGCCAGGGCTC
CAGCAAGCCCAGGGCAAGGATCCTGTGCTGTCTGGTTGAGAGCCTGCCACCGTGTGCG
GGAGTGTGGCCAGGCTGAGTGCATAGGTGACAGGGCGTGAGCATGGCCTGGTGTGT
GAGCTCAGGCCTAGGTGCGCAGTGTGGAGACGGGTGTTGTCGGGGAAAGAGGTGTGGCTTCAA
AGTGTGTGTGTCAGGGGGTGGGTGTGTTAGCGTGGTTAGGGGAACGTGTGCGCGTGCT
GGTGGCATGTGAGATGAGTGAATGCCGGTGAATGTGTCACAGTTGAGAGGTTGGAGCAGG
ATGAGGAATCTGTCAACCACATCAATAACTTGTGGAGCGCCAGCTCTGCCAAGACGCCA
CCTGGCGGACAGCCAGGAGCTCCATGCCAGGCTGCTGTGCATGTTCCCTGTCTGG
TGCCCTTGTGCCGCCCTCTGCAAACCTCACAGGGTCCCCACACAACAGTCCCTCCAGAAG
CAGCCCTCGGAGGCAGAGGAAGGAAAATGGGATGGCTGGGCTCTCCATCTCCTTT
CTCCTTGCCCTCGCATGGCTGCCCTCCCTCCAAACCTCACCTGCTGCCAGCCCC
TTTGCCATAGCTGATTTGGGGAGGAGGAAGGGGAGTTGAGGGAGAAGGGGAGAAAGCT
TATGGCTGGGTCTGGTTCTCCCTCCAGAGGGCTTACTGTTCCAGGGTGGCCCCAGGG
CAGGCAGGGGCCACACTATGCCTGTGCCCTGGTAAAGGTGACCCCTGCCATTACAGCAGC
CCTGGCATGTTCCCTGCCAACAGGAATAGAATGGAGGGAGCTCCAGAAACCTTCCATCCCAA
AGGCAGTCTCCGTGGTTGAAGCAGACTGGATTTGCTCTGCCCTGACCCCTGTCCCTCT
TTGAGGGAGGGGAGCTATGCTAGGACTCCAACCTCAGGGACTCGGGTGGCCTGCCTAGCTT
CTTTGATACTGAAAACTTAAGGTGGAGGGAGGTGCAAGGGATGTGCTTAATAATCAATT
CCAAGCCTCAAAAAAAAAAAAAAA

*-e 20/310***FIGURE 216**

MAGLAARLVLLAGAAALASGSQGDREPVYRDCVLQCEEQNCSGGALNHFRSRQPIYMSLAGW
TCRDDCKYECMWVTVGLYLQEGHKVPQFHGKWPFSRFLFFQE PASAVASFLNGLASLVMCR
YRTFVPASSPMYHTCVAFAWVSLNAFWSTVFHTRDSDLTEKMDYFCASTVILHSIYLCCVR
TVGLQHPAVVSAFRALLMLTVHSYLSLIRFDYGYNLVANVAIGLVNVVWWLAWCLWNQR
RLPHVRKCVVVVLLQGLSLLDFPPLFWVLDHAIWHISTIPVHVLFSSFLEDDSLYLL
KESEDKFKLD

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FIGURE 217

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FIGURE 218

MAPQLPSSRMAPLGMLLGLLMAACFTFCLSHQNLKEFALTNP
EKSSTKETERKETKAEEEL
DAEVLEVFPHTHEWQALQPGQAVPAGSHVRLNLQTGEREAKLQYEDKFRNNLKGKRLDINTN
TYTSQDLKSALAKFKEGAEMESSKEDKARQAEVKRLFRPIEELKKDFDELNVVIETDMQIMV
RLINKFNSSSSLEEKIAALFDLEYYVHQMDNAQDLLSFGLQVINGLNSTEPLVKEYAAF
VLGAAFSSNPKVQVEAIEGGALQKLLVILATEQPLTAKKVLFALCSLLRHFPYAQRQFLKL
GGLQVLRRTLQEKGTTEVLAVRVVTLLYDLVTEKMFAEEEAELTQE
MSPEKLQQYRQVHLLPG
LWEQGWCEITAHLALPEHDAREKVLQTLGVLLTTCRDYRQDPQLGRTLASLQA
EYQVLAS
LELQDGEGYFQELLGSVNSLLKELR

*ee3 / 310***FIGURE 219**

TTCGGCTTCCGTAGAGGAAGTGGCGCGGACCTCATTGGGGTTCGGTTCCCCCCCCTCCC
CTTCCCCGGGGTCTGGGGTGACATTGCACCGCGCCCTCGTGGGGTGCCTGCCACCCCA
CGCGGACTCCCCAGCTGGCGCCCTCCATTGCCTGCTGGTCAAGGCCCCACCCCCC
TTCCCACCTGACCAGCCATGGGGCTGCGGTGTTTCGGCTGCACTTCGTCGCCTCGGC
CCGGCCTCGCGCTTCTGATCACTGTGGCTGGGACCCGCTCGCTTATCATCCTGGT
CGCAGGGCATTTCGGCTGGCTCCCTGCTCCCTGGCTCTGGTCTGGTCACTTGG
TCCATGTGACCGACCGGTCAAGATGCCCGCTCAGTACGGCCTCTGATTTTGGTCTGCT
GTCTCTGCTCTACAGGAGGTGTTCCGCTTGCCACTACAAGCTGCTTAAGAAGGCAGA
TGAAGGGTTAGCATCGCTGAGTGAGGACGGAAGATACCCATCTCCATCCGCAAGATGGCCT
ATGTTTCTGGTCTCTCCTCGGTATCATCAGTGGTCTTCTGTTATCAATATTTGGCT
GATGCACTGGGCCAGGTGTTGGGATCCATGGAGACTCACCTATTACTTCTGACTTC
AGCCTTCTGACAGCAGCCATTACCTGCTCCATACTTTGGGAGTTGTGTTCTTGATG
CCTGTGAGAGGAGACGGTACTGGCTTGGGCTGGTGGTGGAGTCACCTACTGACATCG
GGACTGACATTCTGAACCCCTGGTATGAGGCCAGCCTGCTGCCATCTATGAGTCAGTGT
TTCCATGGGCTCTGGGCTTCATCACAGCTGGAGGGTCCCTCCGAAGTATTAGCGCAGCC
TCTTGTGTAAGGACTGACTACCTGGACTGATGCCATCACAGATCCCACCTGCCTGTCCACTG
CCCATGACTGAGCCCAGCCCCAGCCGGTCCATTGCCACATTCTCTGCTCCTCTCGTC
GGTCTACCCCACCTACCTCCAGGGTTTGCTTGTCCCTTGCTGACCGTAGTCTAAGCTT
TACCAAGGAGCAGCCTGGGTTAGCCAGTCAGTGAUTGGTGGGTTGAATCTGCACTTATCCC
CACCAACCTGGGACCCCTTGTGTTGTCAGGACTCCCCCTGTCAGTGTCTGCTCTCAC
CCTGCCAACACTCACCTCCCTCCCTCTGCAGGCCAGGGCAGGAGACAGTCGGGTGAT
GGTGTATTCTGCCCTGCGCATCCCACCCGAGGACTGAGGGAACTAGGGGGACCCCTGGC
CTGGGGTGCCCTCCTGATGTCCTGCCCTGTATTCCTCATCTCCAGTTCTGGACAGTGCAG
GTTGCCAAGAAAAGGGACCTAGTTAGCCATTGCCCTGGAGATGAAATTAAATGGAGGCTCAA
GGATAGATGAGCTCTGAGTTCTCAGTACTCCCTCAAGACTGGACATCTGGTCTTTCTC
AGGCCTGAGGGGGAAACCATTGGTGTGATAAAATACCCCTAAACTGCCCTTTTTCTTT
GAGGTGGGGGGAGGGAGGGAGGTATATTGGAACTCTTCTAACCTCCTGGCTATATTCTC
TCCTCGAGTTGCTCCTCATGGCTGGCTATTGCGCCCTTCTGCCCTGGTCCAGACCTT
GGGGAAAGGAAGGAAGTGCATGTTGGAACTGGCATTACTGGAACATAATGGTTAACCT
CCTAACCAACCAGCATCCCTCCTCCCCAAGGTGAAGTGGAGGGTGCTGGTGGAGCTGGC
CACTCCAGAGCTGCAGTGCACGGAGTCAGACTACCATGACATCGTAGGGAAGGAGGG
GAGATTTTTGTTAGTTAATTGGGGTGTGGAGGGGGGGAGGTTCTATAAAACTGT
ATCATTCTGCTGAGGGTGGAGTGTCCCATTAAATCAAGGTGATTGTGATTGACT
AATAAAAAAGAATTGAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAA

FIGURE 220

MGAAVFFGCTFVAFGPAFALFLITVAGDPLRVIILVAGAFFWLVSLLASVVWFILVHVTDR
SDARLQYGLLIFGAAVSVLLQEVRFAYYKLLKADEGLASLSEDGRSPISIRQMAYVSGLS
FGIISGVFSVINILADALGPGVVGIHGDSPYYFLTSAFLTAIIILLHTFWGVVFFDACCERRR
YWALGLVVGSHLLTSGLTFLNPWYEASLLPIYAVTVSMGLWAFITAGGSLRSIQRSLLCKD

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FIGURE 221

AAGCTGGTTAAGGAAGCAGAGGAGGGTAGATTGTTGAGTGAGGACGGAAGATCAACCCA
TTTCCATTCCGCCAGATGGCCTATGTTCTGGTCTCTCCCTCGGNATCATCAGTGGGTNT
TNTCTGTTATCAATATTTGGCTGATGCANTGGGCCAGGTGTGGTTGGATCCATGGAGAC
TCACCCATTANTTCCTGANNTCAGCCTTNTGACAGCAGCCATTATCCTGCTC

~~-25/310~~**FIGURE 222**

GACCGACCAGTCAGATGCCGGTCCAGTACGGCTCCTGATTTGGTGCTGCTGTNTCTG
TCCTTCTACAGGAGGTGTTCCGCCTTGCCTANTACAAGCTGCTTAAGAAGGCAGATGAGGGG
TTAGCATNGCTGAGTGAGGACGGAAGATCACCCATTCCATCCGCCAGATGGCCTATGTTN
TGGTNTTCCTCGGTATCATCAGTGGTGTNTCTGTTATCAATATTTGGNTGATGCAN
TTGGGCCAGGTGTGGTGGATCCATGGAGANTCACCTATTAAATTCCCTGAATTCAAGCCTTT
NTGACAGCAGCCATTATCCTGNTCCATACCTTGAGTTGTGTTTGATGCCTGTGA
GAGGAG

*227/310***FIGURE 223**

NGTTGGAGAAGTGGCGCGGACNTCATTGGGGTTCGGTTCCCCCTTCCTTCCCCG
GGGTCTGGGGTGACATTGCACGGGCCCTCGTGGGTGCGTTGCCACCCACGCGGACTCC
CCAGNTGGNGGCCCTCCCATTGCCTGTCCTGGTCAGGCCCCACCCCCCTCCCACNTG
ACCAGCCATGGGGCTGCGGTGTTTCGGCTGCACTTCGTCGCGTTCGGCCGGCCTCG
CGCTTTCTTGATCACTGTGGCTGGGACCCGCTCGCGTTATCATCCTGGTCGCAGGGCA
TTTTCTGGCTGGTCTCCCTGCTCCTGGCCTCTGTTGCTGGTCATCTGGTCCATGTGAC
CGACCGGTAGATGCCGGCTCCAGTACGGCCTCTGATTGGTGCCTGCTCTGTCC
TTCTACAGGAGGTGTTCCGCTTGCTACTACAAGCTGCTTAAGAACGGCAGATGAGGGTTA
GCATCGCTGAGTGAGGACGGAAGATCACCCATCTCCATCGGCCAGATGGCCTATGTTCTGG
TCTCTCCTTCGGTATCATCAGTGGTGTCTCTGTTATCAATATTTGGCTGATGCACCTG
GGCCAGGTGTGGTTGGGATCCATGGAGACTCACCC

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FIGURE 224

GTAAAAGAAAGTGGCCGGACCTTCATTGGGTTTCGGTCCCCCTTCCCNTCCCCGGGG
TCTGGGGGTGACATTGCACCGCGCCNCCTCGTGGGTCGCCTGCCACCCACGCGGACTCCC
CAGNTGGCGCGCCCTCCCATTGCCTGTCCTGGTCAGGCCCCCACCCCCCTTCCCACCTGA
CCAGCCATGGGGCTGCGGTGTTTCGGGCTGCACTTCGTCGCGTTCGGGCCGGCTTC
GCGCTTTCTTGATCACTGTGGCTGGGACCCGCTCGCGTTATCATCCTGGTCGAGGGC
ATTTTCTGGCTGGTCTCCCTGCCTGGCCTCTGTGGTCTGGTCATCTGGTCCATGTGA
CCGACCGGTCAAGATGCCCGCTCCAGTACGGCCTCTGATTTTGGTGCCTGCTCTGTC
CTTCTACAGGAGGTGTTCCGCTTGCCTACTACAAGCTGCTTAAGAAGGCAGATGAGGGTT
AGCATCGCTGAGTGAGGACGGAAGATCACCCATCTCCATCCGCCAGATGGCCTATGTTCTG
GTCTCTCCTCGGTATCATCAGTGGTGTCTCTGTATCAATATTTGGCTGATGCACCT
GGGCCAGGTGTGGTTGGATCCATGGAGAC

FIGURE 225

GCCCCAGGGAGCAGTGGGTGGTTATAACTCAGGCCCGGTGCCAGAGCCCAGGAGGAGGCAG
TGGCCAGGAAGGCACAGGCCTGAGAAGTCTGCGGCTGAGCTGGGAGCAAATCCCCCACCCCC
TACCTGGGGACAGGGCAAGTGAGACCTGGTGAGGGTGGCTCAGCAGGCAGGGAAAGGAGAGG
TGTCTGTGCGTCCTGCACCCACATCTTCTCTGTCCCCTCCTGCCCTGTCTGGAGGCTGCT
AGACTCCTATCTTCTGAATTCTATAGTGCCTGGTCTCAGCGCAGTGCCATGGTGGCCCGT
CCTTGTGGTTCCCTCTACCTGGGAAATAAGGTGCAGCGGCCATGGCTACAGCAAGACCCC
CCTGGATGTGGGTGCTGTGCTGTGATCACAGCCTGCTTCTGGGGTCACAGAGCATGTT
CTCGCCAACAATGATGTTCCCTGTGACCACCCCTCTAACACCGTGCCCTCTGGGAGCAACCA
GGACCTGGGAGCTGGGCCGGGAAGACGCCGGTCGGATGACAGCAGCAGGCCATCATCA
ATGGATCCGACTGCGATATGCACACCCAGCCGTGGCAGGCCCGCTGTTGCTAAGGCCAAC
CAGCTCTACTGCGGGCGGTGTTGGTCATCCACAGTGGCTGCTCACGCCGCCACTGCAG
GAAGAAAAGTTTCAGAGTCCGTCTGGCCACTACTCCCTGTACCAGTTATGAATCTGGGC
AGCAGATGTTCCAGGGGTCAAATCCATCCCCACCCCTGGCTACTCCCACCCCTGGCCACTCT
AACGACCTCATGCTCATCAAACGTGAACAGAAGAATTGTCCTGACTAAAGATGTCAGACCCAT
CAACGTCTCCTCTCATTGTCCTCTGCTGGACAAAGTGCTTGGTGTGGCTGGGACAA
CCAAGAGCCCCAAGTGCACTTCCCTAAGGTCCAGTGCTGAATATCAGCGTGTAAAGT
CAGAAAAGGTGCGAGGATGCTTACCGAGACAGATAGATGACACCATGTTCTGCCGGTG
CAAAGCAGGTAGAGACTCCTGCCAGGGTATTCTGGGGCTGTGGTGTGCAATGGCTCCC
TGCAGGGACTCGTGTCTGGGAGATTACCCCTGTGCCCGGCCAACAGACCGGGTGTCTAC
ACGAACCTCTGCAAGTTACCAAGTGGATCCAGGAAACCATCCAGGCCACTCCTGAGTCAT
CCCAGGACTCAGCACACCGGCATCCCCACCTGCTGCAGGGACAGCCCTGACACTCCTTCAG
ACCCTCATTCCCTCCAGAGATGTTGAGAATGTTCATCTCTCCAGCCCTGACCCATGTCT
CCTGGACTCAGGGTCTGCTTCCCCACATTGGCTGACCGTGTCTCTAGTTGAACCCCTGG
GAACAATTCCAAAAGTCCAGGGCGGGGTTGCGTCTCAATCTCCCTGGGGACTTCA
CCTCAAGCTCAGGGCCCATCCCTCTCTGCAGCTGACCCAAATTAGTCCCAGAAATAAA
CTGAGAAGTGGAAAAAA

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FIGURE 226

MATARPPWMWVL CALIT ALLGVTEHVL ANN DVSCDHPSNTVPSGSNQDLGAGAGEDARSDD
SSSRIINGSDCDMHTQPWQAALLLRPNQLYCGAVLVHPQWL TAAHCRKKVFRVRLGHYSLS
PVYESGQQMFQGVKSIPHGYSHPGHSNDLMLIKLNRRIRPTKDVRPINVSSHCP SAGTKCL
VSGWGTKSPQVHF PKVLQCLNISVLSQKR CEDAYPRQIDDTMFCAGDKAGR DSCQGD SGGP
VVCNGSLQGLVSWGDYP CARPNRPGVYTNLCKFTKWIQETIQANS

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FIGURE 227

ATGGTCAACGACCGGTGGAAGACCATGGCGGCGCTGCCAACTTGAGGACCGGCCGCGA
CAAGCCGCAGCGGCCGAGCTGCGGCTACGTGCTGTGCACCGTGTGCTGGCCCTGGCTGTGC
TGCTGGCTGTAGCTGTCACCGGTGCCGTGCTTCTGAACCACGCCACGCCGCGGGCACG
GCGCCCCCACCTGTCGTCAGCACTGGGCTGCCAGGCCAACAGGCCCTGGTCACTGTGGA
AAGGGCGGACAGCTCGCACCTCAGCATCCTCATTGACCCGCGCTGCCCGACCTACCGACA
GCTTCGCACGCCCTGGAGAGCGCCAGGCCCTCGGTGCTGCAGCGCTGACAGAGCACCGGCC
CAGCCACGGCTGGTGGCGACCAGGAGCAGGAGCTGCTGGACACGCTGCCGACCAGCTGCC
CCGGCTGCTGGCCCGAGCCTCAGAGCTGCAAGACGGAGTGCATGGGCTGCCAGGGAGCATG
GCACGCTGGCCAGGGCCTCAGGCCCTGCAAGAGTGAGCAGGGGCCCTCATCCAGCTTCTC
TCTGAGAGCCAGGGCCACATGGCTCACCTGGTGAACCTCCGTCAGCGACATCCTGGATGCCCT
GCAGAGGGACCGGGGCTGGGCCGCCGCCAACAAGGCCACCTTCAGAGAGGCCCTGCC
GGGGAACCCGGCCGCCGGGCTGTGCCACTGGCTCCCGGCCAGACTGTCTGGACGTCC
CTAAGCGGACAGCAGGACGATGGCGTCACTCTGTCTTCCCACCCACTACCCGCCGGCTT
CCAGGTGTACTGTACATGCCACGGACGGCGGCCCTGGACGGTGTTCAGGCCGGGAGG
ACGGCTCCGTGAACTTCTCCGGGCTGGACCGTACCGAGACGGCTTGGCAGGCTCACC
GGGGAGCACTGGCTAGGGCTCAAGAGGATCCACGCCCTGACCACACAGGCTGCCTACGAGCT
GCACGTGGACCTGGGAGGACTTGAGAATGGCACGGCCTATGCCGCTACGGGAGCTCGGCG
TGGGCTTGTCTCCGTGGACCCCTGAGGAAGACGGTACCCGCTCACCGTGGCTGACTATTCC
GGCACTGCAGGGACTCCCTCTGAAGCACAGGGCATGAGGTTCACCAAGGACCGTGA
CAGCGACCATTAGAGAACAACTGTGCCCTTCTACCGCGGTGCCTGGTACCGCAACT
GCCACACGTCCAACCTCAATGGCAGTACCTGCGCGTGCACGCCCTCATGCCGACGGC
GTGGAGTGGTCTCTGGACCCGGCTGGCAGTACTCACTCAAGTTCTGAGATGAAGATCCG
GCCGGTCCGGGAGGACCGTAGACTGGTGCACCTTGTCCCTGGCCCTGCTGGTCCCTGTC
CCCACATCCCCGACCCACCTCACTTTCTGTGAATGTTCTCCACCCACCTGTGCCTGGCG
CCACTCTCCAGTAGGGAGGGCCGGCCATCCCTGACACGAAGCTCCCTGGCCGGTGAAGT
CACACATGCCCTTCTGCCGTCCCCACCCCTCCATTGGCAGCTCACTGATCTTGCCTC
TGCTGATGGGGCTGGCAAACCTGACGACCCAACTCTGCCCTGCCCCACTGTGACTCCGG
TGCTGTTGCCGTCCCTGGCCAGGATGGTGGAGTCTGCCCTGGCACCCTCTGCCCTGCC
GGCCAAATACCCGGCATATTGGGACAGAGAGCAGGGGAGACAGCACCCCTGGAGTC
CTAGCAGATCGTGGGAAATGTCAGGTCTCTGAGGTCAAGGTCTGAGGCCAGTACCTCCAG
CCCTCCAAATGCCAACCCCCACCCGTTCCCTGGTGCCTGAGAGAACCCACCTCTCCCCAA
GGGCCTCAGCCTGGCTGGGCTGGGCTGGGCCCATCTACCAAGGCCCTGAGGTCAAGGATGG
GAGCTGCTGCTTGGGACCCACGCTCCAAGGCTGAGACCAAGTCCCTGGAGGCCACCCAC
CCTGTGCCCCGGCAGGCCCTGGGCTGCACTCTACCTGCTGTGCCACCTGCTCTG
TCTCAAATGAGGCCAACCCATCCCCACCCAGCTCCGCCGTCTCCTACCTGGGGAGC
CGGGGCTGCCATCCCATTCTCCTGCCCTGGAAAGGTGGTGGGCCCTGCACCGTGGGCT
GGACTGCGCTAATGGGAGCTCTGGTTCTGGCTGGGCCCTAGGCAGGGCTGGGATGAG
GCTTGTACAACCCCCACCAATTCCCAGGGACTCCAGGGCTCTGAGGCCTCCAGGAGG
GCCTTGGGGGTATGACCCCTCCCTGAGGTGGCTGCTCATGAGGAGGCCAACCTGCC
ATTGACCGTGGCACCTGGACCCAGGCCAGGCCGGCCGGCAGTGGTCAAGGGACAGGG
CCACCTCACCGGCAAATGGGTCGGGGACTGGGCCACAGACGCCACCGTGGACA
CTTTCTTGTGAATCCTCCAAACACCCAGCACGCTGTACCCACTCTGTGACACA
TGCAGAGGTGAGACCCGCAAGGCTCCAGGACCAGCAGGCCACAAGGGCAGGGCTGGAGCCGG
TCCTCAGCTGTCTGCTCAGCAGCCCTGGACCCGCCGGCAGTGGTCAAGGGACAGGG
CGGCTTCTCAAGGCCTCTGTGATGGGGCTCCGAAAGGGCTGGAGTCAAGCCTTGGGAGCT
GCCTAGCAGCCTCTCGGCCAGGAGGGAGGTGGCTTCTCCAAAGGACACCCGATGGCA
GGTGCCTAGGGGGGTGGGTTCCGTTCTCCCTCCCACTGAAAGTTGTGCTAAAAA
AAACAATAAATTGACTTGGCACCACTGGGGTTGGGAGAGGCCGTGTGACCTGGCTCTC
TGTCCCAGTGCCACCAGGTCACTCACATGCCAG

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FIGURE 228

MVNDRWKTMGAAQLEDRPRDKPQRPSCGYVLCTVLLALAVLLAVAVTGAFLFLNHAHAPGT
APPPVVSTGAASANSALVTVERADSSHLSILIDPRCPDLTDSFARLESAQASVLQALTEHQQA
QPRLVGDQEQLLDTLADQLPRLLARASELQTECMGLRKGHGTLGQGLSALQSEQGRLIQLL
SESQGHMAHLVNSVSDILDALQRDRGLGRPRNKADLQRAPARGTRPRGCATGSRPRDCLDVL
LSGQQDDGVYSVFPTHYPAGFQVYCDMRTDGGGWTVFQRREDGSVNFFRGWDAYRDGFGR
GEHWLGLKRIHALTTQAAAYELHVDLEDFENG TAYARYGSFGVGLFSVDPEEDGYPLTVADYS
GTAGDSLLKHSGMRFTTKDRDSDHSENNCAAFYRGAWWYRNCHTSNLNGQYLRGAHASYADG
VEWSSWTGWQYSLKFSEM KIRPVREDR

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FIGURE 229

GCAGTCAGAGACTTCCCTGCCCTCGCTGGAAAGAACATTAGGAATGCCTTTAGTGCCT
TGCTTCCTGAACTAGCTCACAGTAGCCCCGGGCCAGGGCAATCCGACCACATTCACTCT
CACCGCTGTAGGAATCCAGATGCAGGCCAAGTACAGCAGCACGAGGGACATGCTGGATGATG
ATGGGGACACCACCATGAGCCTGCATTCTCAAGCCTCTGCCACAACCTCGGCATCCAGAGCCC
CGGCGCACAGAGCACAGGGCTCCCTCTCAACGTGGCGACCAGTGGCCCTGACCCCTGCTGAC
TTTGTGCTTGGTGCCTGATAGGGCTGGCAGCCCTGGGCTTTGTTTTCACTACC
AGCTCTCCAATACTGGTCAAGACACCATTCTCAAATGGAAGAAAGATTAGGAATACTGTCC
CAAGAGTTGCAATCTCTCAAGTCCAGAATATAAGCTTGAGGAAGTCTGCAGCATGTGGC
TGAAAAACTCTGCGTGGCTGTATAACAAAGCTGGAGCACACAGGTGCAGCCCTGTACAG
AACAAATGGAATGGCATGGAGACAATTGCTACCAAGTCTATAAAAGACAGCAAAAGTTGGAG
GACTGTAAATATTCTGCCTTAGTGAAAACCTTACCATGCTGAAGATAAACAAAGAAGA
CCTGGAATTGCGCGTCTCAGAGCTACTCTGAGTTTCTACTCTTATTGGACAGGGCTTT
TGCGCCCTGACAGTGGCAAGGCCTGGCTGGATGGATGGAACCCCTTCACCTCTGAACCTG
TTCCATATTATAATAGATGTCACCAGCCAAAGAAGCAGAGACTGTGTGCCATCCTCAATGG
GATGATCTCTCAAAGGACTGCAAAGAATTGAAGCGTTGTCTGTGAGAGAAGGGCAGGAA
TGGTGAAGCCAGAGAGCCTCCATGTCCCCCTGAAACATTAGCGAAGGTGACTGATTCGCC
CTCTGCAACTACAAATAGCAGAGTGAGCCAGGCGGTGCCAAAGCAAGGGCTAGTTGAGACAT
TGGGAATGGAACATAATCAGGAAAGACTATCTCTGACTAGTACAAAATGGTTCTCGTG
TTTCCTGTTAGGATCACCAGCATTCTGAGCTGGTTATGCACGTATTAACAGTCACA
AGAAAGTCTTATTACATGCCACCAACCTCAGAAACCCATAATGTCATCTGCCCTTTG
GCTTAGAGATAACTTTAGCTCTTCTCAATGTCTAATATCACCTCCCTGGTTCAT
GTCTTCCACTTGTTGGATAAGAAACTTTGAAGTAGAGGAAATACATTGAGGTAAC
ATCCTTTCTGACAGTCAAGTAGTCCATCAGAAATTGGCAGTCACCTCCCAGATTGTACC
AGCAAATACACAAGGAATTCTTTGTTCAGTTCAACTAGTCCCTCCAAATCCAT
CAGTAAAGACCCATCTGCCCTGTCATGCCGTTCCAACAGGGATGTCACCTGATATGAG
AATCTCAAATCTCAATGCCCTATAAGCATTCTCCGTGTCATTAAGACTCTGATAATTG
TCTCCCTCCATAGGAATTCTCCAGGAAAGAAATATATCCCCATCTCCGTTCATATCAG
AACTACCGTCCCCGATATTCCCTTCAGAGAGATTAAAGACCAGAAAAAGTGAGCCTCTCA
TCTGCACCTGTAATAGTTCAGTTCTATTTCATTGACCCATATTACCTTCAG
GTACTGAAGATTAAATAATAATGTAAATAACTGTGAAAAA

FIGURE 230

MQAKYSSTRDMLDDDGDTTMSLHSQASATTRHPEPRRTEHRAPSSTWRPVALTLLTLCLVLL
IGLAALGLLFFQYYQLSNTGQDTISQMEERLGNTSQELQSLQVQNIKLAGSLQHVAEKLCRE
LYNKAGAHRCSPCTEQWKWHGDNCYQFYKDSKSWEDCKYFCLSENSTMLKINKQEDLEFAAS
QSYSEFFYSYWTGLLRPDSGKAWLWMDGTPFTSELFHIIIDVTSPRSRDCVAILNGMIFSKD
CKELKRCVCERRAGMVKPESLHVPPETLGEGD

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FIGURE 231

AATTTCACCGCTGTAGGAATCCAGATGCAGGCCAAGTACAGCAGCACGAGGGACATGNTGG
ATGATGATGGGACACCACCATGAGCCTGCATTNTCAAGCTTTGCCACAATTGGCATCCAG
AGCCCCGGCGCACAGAGCACAGGGNTCCTTTCAACGTGGCGACCAGTGGCCCTGACCCTG
CTGACTTGTGCTTGGTCTGCTGATAGGGCTGGCAGCCCTGGGGCTTTGTTTTTCAGTA
CTACCAGCTCTCCAATACTGGTCAAGACACCATTCTCAAATGGAAGAAAGATTAGGAAATA
CGTCCAAGAGTTGCAATTNTCAAGTCAGAATATAAGCTTGCAGGAAGTNTGCAGCAT
GTGGCTGAAAAACTCTGTCGTGAGCTGTATAACAAAGCTGGAGGAACCTTGAGGGCAA
AGTNCTCATNTACTATACACACACCACTCCC

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FIGURE 232

GCCGAGCGCAAGAACCTGCGCAGCCCAGAGCAGCTGCTGGAGGGAAATCGAGGCCGCGGCTC
 CGGGATTGGCTGGCCGCTGGCTCTGCTCTGGGGAGGGAGCGGGCCCGCCGCGGG
 CCCAGCCCTCGGATCCGCCCCCTCCCGGTCCCGCCCTCGGAGACTCCTCTGGCTGCT
 CTGGGGTTGCCGGGGACCCGCGGTCCGGCGCC**ATG**CGGGCATCGCTGCTGCT
 TCGGTGCTGCCGGCGAGGGCCGTGGCGTGGGCATCTCCCTGGGCTTCACCTGAGCCT
 GCTCAGCGTCACCTGGTGGAGGAGCGTGCGGCCAGGCCCGCCAAACCTGGAGACTCTG
 AGCTGCCGCCGGAACACCAACCGCGCGCCGGCCAACTCGGTGCAGCCGGAGCG
 GAGCGCGAGAAGCCGGGCCGAAGGCAGCCGGGAGAATTGGGAGCCGCGTCTGCC
 CTACCACCTGCACAGCCGGCAGGCCAAAAAGGCCGTCAAGGACCGCTACATCAGCA
 CGGAGCTGGCATCAGGAGGCTGCTGGCGGTGCTGACCTCTCAGACACGCTGCC
 ACGCTGGCGTGGCGTAACCGCACGCTGGGCACCGGCTGGAGCGTGTGGTCTGAC
 GGGCGCACGGGCCGGGCCACCTGGCATGGCAGTGGTGCAGCTGGCGAGGAGCGAC
 CCATTGGACACCTGCACCTGGCGTGCACCTGCTGGAGCAGCACGGCAGCAGACTTGAC
 TGGTTCTCCTGGTGCCTGACACCACTACACCAGGGCGCACGGCCTGGCACGCC
 CCACCTCAGCCTGGCTCCGCCACCTGTACCTGGGCCGGCCAGGACTTCATGGCG
 GAGAGCCCACCCCCGGCGCTACTGCCACGGAGGCTTGGGGTGTGCTGCGCATGCTG
 CTGCAACAATGCGCCCCACCTGGAAGGCTGCGCAACGACATCGTAGTGC
 CGAGTGGCTGGCTGCTGCAATTCTCGATGCCACCGGGTGGCTGCACTGGT
 GACACGAGGGTGCAGTGCAGGAGGCCAGTGCAGGAGGGGACCC
 TTCCGAAGTGCCTGACAGCCCACCTGTGCGTGACCTGTGCACATGT
 ACCAGCTGCACAAAGCTTCGCCAGCTGAACGACGTACCA
 GAGGAGATCCAGGAGTTACAGTGGGAGA
 TCCAGAAATACCAGCCATCTGGCCGTGATGGGGACCGGGCAGCTGCT
 CCAGCACCATCCCAGCCCTCCGCTTGAGGTGCTGCGCTGG
 GCACGCTTCTCTGCGCGATGGCTACCCGCTGCCACTGCGTGGGGCT
 ATGTGGCGATGTTCTGGGACAGCTCTAGAGGAGCTGAACCGCG
 CGGCTCCAGAACAGCAGCTGGTAATGGCTACCGACGCTT
 GAGGAGGCTGCGCTACTGCGTGTGCTGCGCTGG
 CTTCTGGAGGCCTTGCCACTGCAGCACTGGAGCCTGG
 TGCTGCTACTGTATGAGCCGCGCAGGCCAGCGCGTGGCC
 GTCAAGGCCACGTGGCAGAGCTGGAGCGGGTT
 TGTGCAGACAGCCGACCCCTACCAACTGCGCCT
 TGGACACACTGTTCTGCTGGCCGGCCAGACACGG
 TGCCGCATGCATGCCATCTCGGCTGGCAGGCC
 CCCAGGTGTGGCCCCACCAAGGGCTGGCCCC
 TTGATGCCAGGCAGCCAGCGAGGCCTGCT
 CGCCTGGCGGAGCCTCAGAAC
 CAAGCAGCTGGCT
 GTGCTACTGCT
 CAACAGCACCT**TGA**CCCCACCC
 CTGCCCCGTGGCATGGCCACACCC
 CTCCCCAAAACCAGAGCCACCTGCCAGCCTCG
 AAGCTGGCCC
 GGACGTGCC
 GCTGATT
 CTCTGGCC
 GCATCT
 AGTGTGGAAAAA

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FIGURE 233

MRASLLSVLRPAGPVAVGISLGFTLSLLSVTWVEEPCPGPPQPGDSELPPRGNTNAARRP
NSVQPGAEREKPGAGEGAGENWEPRVLPYHPAQPGQAACKAVRTRYISTELGIRQRLLVAVL
TSQTLPTLGVAVNRTLGHRLERVVFLTGARGRRAPPMAVVTLGEERPIGHLHLALRHLL
QHGDDFDWFFLVPDTTYTEAHGLARLTGHLSSLASAAHLYLGRPQDFIGGEPTPGRYCHGGFG
VLLSRMLLQQLRPHLEGCRNDIVSARPDEWLGRICILDATVGVCTGDHEGVHYSHLELSPGEP
VQE GDPHFRSALT AHPVRDPVHMYQLHKAFARAE LERTYQEIQELQWEIQNTSHLAVGDRA
AAWPVGIPAPS RPA SRF E VLRWDYFTEQHAFSCADGSPRCPLRGADRADVADVLGTALEELN
RRYHPALRLQKQQLVNGYRRFD PARGMEY TLDLQLE ALTPQGGRRPLTRRVQLLRPLSRVEI
LPV PVY VTEASRLTVLLPLAAAERDLAPGFLEAFATAALEPGDAAAALTLLL
YEPRQ AQRVA
HADV FAPVKAHVAELERRFPGARVPWLSVQTAAPSPLRLMDLLSKHPLDTLFLLAGPDTVL
TPDFLNRCRMHAISGWQAFFPMHFQAFHPGVAPPQGP GPPELGRDTGRFDRQAASEACFYNS
DYVAARGRLAAASEQEEELLES LDVYELFLHFSSLHVLRAVEPALLQRYRAQTCSARLSEDL
YHRCLQSVLEGLGSRTQLAMLLFEQE QGNST

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FIGURE 234

GCTCTGGCCGGCCCCGGCGATTGGTCACCGCCCGCTAGGGACAGCCCTGGCCTCCTGTAT
TGGCAAGCGCTGGCCACCTCCCCACACCCCTGCGAACGCTCCCTAGTGGAGAAAAGGAGT
AGCTATTAGCCAATTGGCAGGGCCCCTTTAGAAGCTTGATTCCTTGAAAGATGAAAG
ACTAGCGGAAGCTCTGCCTCTTCCCCAGTGGCGAGGGAACTCGGGCGATTGGCTGGAA
CTGTATCCACCAAATGTCACCGATTCTCCTATGCAGGAAATGAGCAGACCCATCAATAA
GAAATTCTCAGCCTGGCGAAAATGGTGGCCCCACGAAGCCACGACAACGGAGGCAAAG
AGGGTTGCTCAACGCCCGCCTCATTGGAAAACCAAATCAGATCTGGACCTATATAGCGTG
GCGGAGGCAGGGCGATGATTGTCGCGCTCGCACCCACTGCAGCTGCGCACAGTCGCATTCT
TTCCCCGCCCCCTGAGACCCCTGCAGCACCATCTGTC**ATGGGGCTGGGCTGTTGGTTGAGC**
GCTCGCCGTCTTGGCGGCAGCGCGACCGAGGGCTCCGGCCGCCCGTCCGCTGGGA
ATCTAGCTTCTCCAGGACTGTGGTCGCCCCGTCCGCTGTGGGGAAAGCGGCCCCAGAAC
CGACCACACCGTGGCAAGAGGACCCAGAACCCGAGGACGAAAATTGTATGAGAAGAACCA
GAACCTCCATGGTTATGACAAGGACCCCGTTGGACGTCTGGAACATGCGACTTGTCTTCTT
CTTGCGTCTCCATCATCCTGGCTTGGCAGCACCTTGTGGCTATCTGCCTGACTACA
GGATGAAAGAGTGGTCCGCCGAAGCTGAGAGGCTGTGAAATACCGAGAGGCCAATGGC
CTTCCCATCATGGAATCCAAC TGCTCGACCCAGCAAGATCCAGCTGCCAGAGGATGAG**TG**
ACCAGTTGCTAAGTGGGCTCAAGAAGCACCGCCTCCCCACCCCTGCCATTCTGAC
CTCTTCTCAGAGCACCTAATTAAAGGGCTGAAAGTCTGAA

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FIGURE 235

MAAGLFGLSARRLLAAAATRGLPAARVRWESSFRTVVAPS A VAGKRPPEPTTPWQEDPEPE
DENLYEKNPD SHGYDKDPVLDVNMR LVFFF GVSIIILVLGSTFVAYLPDYRMKEWSRREAER
LVKYREANGLPIMESNCFDPSKIQLPEDE

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FIGURE 236

GGCGGGCTGGGCTGTTGGTTGAGCGCTGCCGTCTTGGCGGCAGCGCGACCGAGGGC
TCCC GGCCGCCCGTCCGCTGGGAATCTAGCTTCTCCAGGACTGTGGTCGCCCCGTCCGCT
GTGGCGGGAAAGCGGCCCCAGAACCGACCACACCGTGGCAAGAGGACCCAGAACCCGAGGA
CGAAAAC TTGTATGAGAAGAACCCAGACTCCCATGGTTATGACAAGGACCCGTTTGGACG
TCTGGAACATGCGACTTGTCTTCTTGGCGTCTCCATCATCCTGGTCCTTGGCAGCACC
TTTGTGGCCTATCTGCCTGACTACAGGATGAAAGAGTGGTCCGCCGAAGCTGAGAGGCT
TGTGAAATACCGAGAGGCCAATGGCCTTCCCATCATGGAATCCAAGTGCTTCGACCCAGCA
AGATCCAG

FIGURE 237

GCGGCGGCT**ATG**CCGCTTGCTCTGCTCGTCCTGTTGCTCCTGGGGCCCGGCGGTGGTGCCT
TGCAGAACCCCCACGCGACAGCCTGCGGGAGGAACCTGTCATCACCCCGCTGCCTCCGGGG
ACGTAGCCGCCACATTCCAGTTCCGACCGCCTGGGATTGGAGCTTCAGCGGGAAAGGAGTG
TCCCATTACAGGCTCTTCCAAAGCCCTGGGCAGCTGATCTCAAGTATTCTACGGGA
GCTGCACCTGTCAATTACACAAGGCTTTGGAGGACCCGATACTGGGGCCACCCTCCTGC
AGGCCCCATCAGGTGCAGAGCTGTGGGTCTGGTTCCAAGACACTGTCACTGATGTGGATAAA
TCTTGGAAAGGAGCTCAGTAATGTCTCTCAGGGATCTTCTGCGCCTCTCAACTTCATCGA
CTCCACCAACACAGTCACCTCCACTGCCTCCTCAAACCCCTGGGTCTGGCCAATGACACTG
ACCAACTACTTCTCGCTATGCTGTGCTGCCGGAGGTGGCTGCACCGAAAACCTCACC
CCCTGGAAGAAGCTCTGCCCTGTAGTTCCAAGGAGGCAGGCCTCTGTGCTGCTGAAGGCAGA
TCGCTTGTCCACACCAGCTACCAACTCCAGGCAGTGCATATCCGCCCTGTTGAGAAATG
CACGCTGTACTAGCATCTCCTGGGAGCTGAGGCAGAACCCCTGTCAGTTGATTTGATGCCCTC
ATCACGGGGCAGGGAAAGAAAGACTGGTCCCTCTCCGGATGTTCTCCGAACCCCTCACGGA
GCCCTGCCCTGGCTTCAGAGAGGCCAGTCTATGTGGACATCACCACCTACAACCAGGACA
ACGAGACATTAGAGGTGCACCCACCCCCGACCACTACATATCAGGACGTCACTCTAGGCACT
CGGAAGACCTATGCCATCTATGACTTGCTTGACACCGCCATGATCAACAACCTCTGAAACCT
CAACATCCAGCTCAAGTGGAAAGAGACCCCCAGAGAAATGAGGCCCTGGCTGAGCACACTGCTGTAC
ATGCCAGCGGTACGTGAGTGGCTATGGGCTGCAGAAGGGGAGCTGAGCACACTGCTGTAC
AACACCCACCCATACCGGGCTTCCCGGTGCTGCTGGACACCGTACCCCTGGTATCTGCG
GCTGTATGTGACACCCCTCACCACCTCAAGGGCAAGGAGAACAAACCAAGTTACATCC
ACTACCAGCCTGCCAGGACCGGCTGCAACCCACCTCCTGGAGATGCTGATTCAAGCTGCCG
GCCAACTCAGTCACCAAGGTTCCATCCAGTTGAGCGGGCGTGTGAAGTGGACCGAGTA
CACGCCAGATCTAACCATGGCTTCTATGTCAGCCCATCTGTCTCAGCGCCCTGTGCCCA
GCATGGTAGGCCAAGCCAGTGGACTGGGAAGAGAGTCCCTCTTCAACAGCCTGTTCCA
GTCTCTGATGGCTCTAACACTTTGCGGCTCTACACGGAGCCGCTGCTGGTGAACCTGCC
GACACCGGACTTCAGCATGCCCTACACGTGATCTGCCTCACGTGCACTGTGGTGGCCGTGT
GCTACGGCTCCTCTACAATCTCCTCACCGAACCTCCACATCGAGGAGCCCCCACAGGT
GGCCTGGCCAAGCGGCTGGCCAACCTTATCCGGCGCCCGAGGTGTCCCCCCTACTCT**TGA**TT
CTTGCCTTCCAGCAGCTGCAGCTGCCGTTCTCTGGGGAGGGAGGCCAAGGGCTGTT
TCTGCCACTTGTCTCCTCAGAGTTGGCTTTGAACCAAAGTGCCTGGACAGGTCAAGGGC
CTACAGCTGTGTTGTCAGTACAGGAGCCAGGCAAATGTGGCATTGAATTGAATTAA
CTTAGAAATTCAATTCCCTCACCTGTAGTGGCCACCTCTATATTGAGGTGCTCAATAAGCAA
AGTGGTCGGTGGCTGCTGATTGGACAGCACAGAAAAAGATTCCATCACCACAGAAAGGTC
GGCTGGCAGCACTGGCCAAGGTGATGGGGTGTGCTACACAGTGTATGTCACTGTGTAGTGG
TGGAGTTACTGTTGGAATAAAACGGCTGTTCCGTGGAAAAAAAAAAAAAA

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FIGURE 238

MPLALLVLLLLGPAGWCLAEPPRDSLREELVITPLPSGDVAATFQFRTRWDSELQREGVSHY
RLFPKALGQLISKYSLRELHLSFTQGFWRTRYWGPPFLQAPSGAELWVWFQDTVTDVDKSWK
ELSNVLSGIFCASLNFIDSTNTVTPTASFKPLGLANDTDHYFLRYAVLPREVVCTENLTPWK
KLLPCSSKAGLSVLLKADRLFHTSYHSQAVHIRPVCRNARCTSISWELRQTLSVVFDAFITG
QGKKDWSLFRMFSRTLTEPCPLASESRVYVDITTYNQDNETLEVHPPPTTYQDVILGTRKT
YAIYDLLDTAMINNSRNLNQLKWKRPENEAPPVPFLHAQRYVSGYGLQKGELSTLLYNTH
PYRAFPVLLLDTVPWYLRLYVHTLTITSKGKENKPSYIHYQPAQDRLQPHLLEMLIQLPANS
VTKVSIQFERALLKWTEYTPDPNHGFYVSPSVLSALVPSMVAAKPVDWEESPLFNSLFPVSD
GSNYFVRLYTEPLLVLNLPTPDFSMPYNVICLTCTVVAVCYGSFYNLLTRTFHIEEPRTGGLA
KRLANLIRRARGVPPL

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FIGURE 239

CAACATGGGTCCAGCAGCTCTGGTCCTCATGGTGTCTCGTTCTGTGACCTGGTGG
CTGTGGAAGGAGTTAAAGAGGGTATAGAGAAAGCAGGGTTGCCAGCTGACAACGTACGC
TGCTTCAAGTCCGATCCTCCCCAGTGTACACAGACCAGGACTGTCTGGGGAAAGGAAGTG
TTGTTACCTGCACTGTGGCTTCAAGTGTGATTCTGTGAAGGAACTGGAAGAAGGAGGAA
ACAAGGATGAAGATGTGTCAAGGCCATACCCCTGAGCCAGGATGGAGGCCAAGTGTCCAGGC
TCCTCCTCTACCAGGTGTCCTCAGAAATGATGCTGGTCCTTCTACCTCTGGGGTCACTC
TCACTGGCACCTGCCCTGAGGTCCTGAGACTTCCAATGGAAGAAGCAATAACCAACC
CCACCAAAGAAAACCTGAGCTTGAAGTCCTTCCCCAAAAGAGGGAAAGAGTCACAAAAG
TCCAGACCCCAGGGACGGTACTTCCCTCTACCTGGTGCCTCCCTAATGCTCATGAAT
GGACCCCTCATGAATGAAACCAGTGCCTTATAAGAGACCCCAAAGAGCTGCCCTGCCCTTC
TGCAATGTGTGATCACAGCTAGAAGGCACTGTCAAGAGAGAAACTGGTCCTCACCAGATG
CTGAATCTGCTGGTGCCTTGATCTGGACTTCCCAGCCTCTAGAACTGTAAGAAATAATAT
TTGCTGTTATAATCCAA

FIGURE 240

MGSSSFLVLMVSLVLVTLVAVEGVKEGIEKAGVCPADNVRCFKSDPPQCHTDQDCLGERKCC
YLHCGFKCVIPVKELEEGGNKDEDVSRPYPEPGWEAKCPGSSSTRCPQK

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FIGURE 241

AAACTCAGCACTGCCGGAGTGGCTCATTGTTAAGACAAAGGGTGTGCACTTCCTGGCCAGG
AAACCTGAGCGGTGAGACTCCCAGCTGCCTACATCAAGGCCCCAGGACATGCAGAACCTTCC
TCTAGAACCCGACCCACCACCA**ATG**AGGTCCCTGCCCTGGAGATGCAGGCACCTGAGCCAAGG
CGTCCAGTGGTCCTGCTCTGGCTGTCTTCTTCGCCCCCTGGCCCTTTTA
TTAAGGAGCCTCAAACAAAGCCTCCAGGCATCAACGCACAGAGAACATTAAAGAAAGGTCT
CTACAGTCCCTGGCAAAGCCTAAGTCCCAGGCACCCACAAGGGCGAGGAGGACAACCAC
TGCAGAGCCAGCGCCAGAGAACAAATGCCCTAACACACAAACCCAGGCCAAGGCCACACCA
CCGGAGACAGAGGAAGGGAGGCCAACAGGCCCGGAGGAGCAGGACAAGGTGCCAC
ACAGCACAGAGGGCAGCATGGAAGAGCCCAGAAAAAGAGAAAACCATGGTGAACACACTGTC
ACCCAGAGGGCAAGATGCAGGGATGCCCTCTGGCAGGACAGAGGACAATCATGGAAGAGCC
AGGACACAAAGACGACCCAAGGAAATGGGGCCAGACCAGGAAGCTGACGGCCTCAGGACG
GTGTCAGAGAACGACCAAGGGCAAAGCGGAAACCACAGCCAAGACGCTCATCCAAAAGTCA
GCACAGAAATGCTGGCTCCACAGGAGCAGTGTCAACAAGGAGGACAGAAAGGAGTGACCA
CAGCAGTCATCCCACCTAAGGAGAAGAACCTCAGGCCACCCACCCCTGCCCTTCCAG
AGCCCCACGACGCAGAGAAACCAAAGACTGAAGGCCAACCTCAAATCTGAGCCTCGGTG
GGATTTGAGGAAAATACAGCTTCGAAATAGGAGGCCCTCAGACGACTTGCCCTGACTCTG
TGAAGATCAAAGCCTCCAAGTCGTGGCTCCAGAAACTCTTCTGCCAACCTCACTCTC
TTCCTGGACTCCAGACACTCAACCAGAGTGAGTGGGACGCCCTGGAACACTTGCACCACC
CTTGCTTCATGGAGCTCAACTACTCCTGGTGCAGAAGGTGTGACACGCTTCCCTCCAG
TGCCCCAGCAGCTGCTCTGGCAGCCTCCCCGTGGAGCCTCCGGTGCATCACCTGT
GCCGTGGTGGCAACGGGGCATCCTGAACAACTCCCACATGGGCCAGGAGATAACAGTCA
CGACTACGTGTTCCGATTGAGCGGAGCTCTCATTAAAGGCTACGAACAGGATGTGGGACTC
GGACATCCTCTACGGCTTACCGCCTCTCCCTGACCCAGTCACTCCTTATATTGGCAAT
CGGGGTTCAAGAACGTGCCTCTGGGAAGGACGTCCGCTACTGCACCTCTGGAAAGGCAC
CCGGGACTATGAGTGGCTGGAAGCACTGTTATGAATCAGACGGTGTGACTCAAAAACCTT
TCTGGTCAGGCACAGACCCCAGGAAGCTTTCGGGAAGGCCCTGCACATGGACAGGTACCTG
TTGCTGCACCCAGACTTCTCGATACTGAAGAACAGGTTCTGAGGTCTAAGACCCCTGGA
TGGTGCCCACTGGAGGATATACGCCCAACTGGGCCCTCTGCTGCTCACTGCCCTTC
AGCTCTGTGACCAAGGTGAGTGCTTATGGCTCATCACTGAGGCCATGAGCGCTTCTGAT
CACTACTATGATACATCATGGAAGCGGCTGATCTTACATAAACCATGACTTCAAGCTGG
GAGAGAAGTCTGGAAGCGGCTACAGATGAAGGGATAATCGGCTGTACCGCGCTGGTC
CCGGAACGTCCAAAGCCAAGAAC**TGA**CCGGGGCCAGGGCTGCCATGGTCTCCTGCCCTGCTC
CAAGGCACAGGATACTGGGAATCTTGAGACTCTTGGCATTCCCATGGCTCAGACTAA
GCTCCAAGCCCTCAGGAGTCCAAAGGGACACTTGAACCATGGACAAGACTCTCAAGAT
GGCAAATGGCTAATTGAGGTTCTGAAGTTCTCAGTACATTGCTGTAGGTCTGGAGGCCAGG
GATTTTAATTAAATGGGGTGTGGGCAATACCAATTCTGCTGAAACACTCT
CCAGTCCAAAAGCTTCTTGATACTGAGAAAAAGAGCCGGATTACAGAAACATATAGATCTG
GTTGAAATTCCAGATCGAGTTACAGTTGAAATCTGAAGGTATTACTTAACCTCACTAC
AGATTGTCTAGAACACCTTCTAGGAGTTATCTGATTCTAGAAGGGTCTATACTTGTCCCTG
TCTTTAAGCTATTGACAACCTACGTGTTGAGAAAACGTGATAATAACAAATGATTGTT
GTCCATGGAAAGGCAAATAAATTCTACAGTGAaaaaaaaaaaaaaa

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FIGURE 242

MRSCLWRCRHLSQGVQWSLLLAVLVFFLFALPSFIKEPQTKPSRHQRTENIKERSLQSLAKP
KSQAPTRARRTTIYAEPAPENNALTQTPKAHTTGDRGKEANQAPPEEQDKVPHTAQRAAW
KSPEKEKTMVNTLSPRGQDAGMASGRTEAQSWKSQDTKTTQGNGGQTRKL TASRTVSEKHQG
KAATTAKTLIPKSQHRLMLAPTGA VSTRTRQKGVT TAVIPPKEKKPQATPPPAPFQSPTTQRN
QRLKAANFKSEPRWD FEEKYSFEIGGLQTTCPDSVKIKASKSLWLQKLFLPNLTFLDSRHF
NQSEWDRLEHFAPPFGFMELNYSLVQKV VTRFPFPV PQQQLLLASLPAGSLRCITCAVVGNGG
ILNNNSHMGQEIDSHDYVFRRLSGALIKGYEQDVGTRTSFYGFTA FSLTQSLLILGNRGFKNP
LGKDVRYLHFLEGTRDYEWLEALLMNQTVMSKNLFWFRHRPQEAFREALHMDRYLLHPDFL
RYMKNRFLRSKTLDGAHWRIYRPTTGALLLTALQLCDQVSAYGFITEGHERFSDHYYDTSW
KRLIFYINHDFKLEREVWKRLHDEGIIRLYQRPGPGTAKAKN

FIGURE 243

CGATCGCGGACCCGGCACCCCTCCTGGGCTGCTGGTGCCTGGGCCTCGCCG
GAGCAGCGAGTGGAAATTGTTCTCGAGATCTGAGGATGAAGGACAAGTTCTAAAACACCT
TACAGGCCCTTTATTTAGTCAAAGTCAGCAAACACTTCCATAGACTTATCACAACA
CCAGAGACTGCACCATTCTGCATACTATAAAAGATGCCAGGCTTACCCGGCTGGCT
GTCAGTCCAGTGTGCATGGAGGATAAGTGAGCAGACCGTACAGGAGCAGCACACCAGGAGCC
ATGAGAAGTGCCTGGAAACCAACAGGGAAACAGAACTATCTTATACACATCCCTCATGG
ACAAGAGATTTATTTGCAGACAGACTCTCCATAAGTCCTTGAGTTGTATGTTGTTG
ACAGTTGCAGATATATTGATAATCAGTGTACTTGACAGTGTATCTGTCACTTATT

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FIGURE 244

MRGPGHPLLGLLLVLGPSPEQRVEIVPRDLRMKDCKFLKHLTGPLYFSPKCSKHFHRLYHNT
RDCTIPAYYKRCARLLTRLAVSPVCMEDK

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FIGURE 245

GGGCTGGCCCCCGCCGCAGCTCCAGCTGGCCGGCTTGGTCCTGCGGTCCCTCTCTGGGAGG
CCCGACCCCGGCCGCCAGCCCCACCATGCCACCCGCCGGGCTCCGCCGGCCGCC
CTCACCGCAATCGCTCTGTTGGTCTGGGGCTCCCTGGTCTGGCCGGCGAGGACTGCCT
GTGGTACCTGGACCGGAATGGCTCCTGGCATCCGGGTTAACTGCGAGTTCTCACCTTCT
GCTGCGGGACCTGCTACCATCGGTACTGCTGCAGGGACCTGACCTTGCTTATCACCGAGAGG
CAGCAGAAGCACTGCCTGCCCTCAGCCCCAAGACCATAGCAGGCATGCCCTCAGCTGTGAT
CCTCTTGTGCTGTGGTTGCCACCACCATCTGCTGCTCCTCTGTTCTGTTGCTACCTGT
ACCGCCGGCGCCAGCAGCTCCAGAGCCCATTGAAGGCCAGGAGATTCCAATGACAGGCATC
CCAGTGCAGCCAGTATAACCCATACCCCCAGGACCCAAAGCTGCCCTGCACCCCCACAGCC
TGGCTTCATGTACCCACCTAGTGGCCTGCTCCCCAATATCCACTCTACCCAGCTGGGCC
CAGTCTACAACCCCTGCAGCTCCTCCTCCCTATATGCCACCACAGCCCTTACCCGGGAGCC
TGAGGAACCAGCCATGTCTCTGCTGCCCTTCAGTGATGCCAACCTGGGAGATGCCCTCAT
CCTGTACCTGCATCTGGCCTGGGGTGGCAGGAGTCCTCAGCCACCAGGCCAGACCAA
GCCAAGCCCTGGCCCTACTGGGACAGAGCCCCAGGGAGTGGAACAGGAGCTGAACCTAGA
ACTATGAGGGTTGGGGGAGGGCTTGAATTATGGCTATTTTACTGGGGCAAGGGAGG
GAGATGACAGCCTGGTCACAGTGCCTGTTCAAATAGTCCCTTGCTCCCAAGATCCCAG
CCAGGAAGGCTGGGCCCTACTGTTGCTCCCTCTGGCTGGGTGGGGAGGGAGGAGGAGGT
TCCGTCAGCAGCTGGCAGTAGCCCTCTCTGGCTGCCACTGCCACATCTGGCCTG
CTAGATTAAAGCTGTAAAGACAAAA

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FIGURE 246

MPPAGLRRAAPLTAIALLVLGAPLVLAGEDCLWYLDRNGSWHPGFNCEFFTFC CGTCYHRYC
CRDLTLLITERQQKHCLAFSPKTIAGIASAVILFVAVVATTICCFCLSCCYLYRRRQQLQSP
FEGQEIPMTGIPVQPVYPYPQDPKAGPAPPQPGFMYPPSGPAPQYPLYPAGPPVYNPAAPPP
YMPPQPSYPGA

*251/310***FIGURE 247**

GGGGGAGCTAGGCCGGCGGCAGTGGTGGCGGCCGCAAGGGTGAGGGCGGGCCCCAGAA
 CCCCAGGTAGGTAGAGCAAGAAGATGGTGTCTGCCCTCAAATGGTCCCTTGCACCATG
 TCATTCTACTTTCTCACTGTTGGCTCTCTTAACTGTGTCCTCCTCATGGTGTAGAG
 CACTGAAGCATCTCCAAAACGTAGTGTAGGGACACCATTCCCTGGAATAAAATACGACTTC
 CTGAGTACGTACATCCCAGTTATTATGATCTTGATCCATGAAACCTACCAACGCTGACC
 TTCTGGGAACCCACGAAAGTAGAAATCACAGCCAGTCAGCCCACAGCACCATCATCCTGCA
 TAGTCACCACCTGCAGATATCTAGGGCCACCCCTCAGGAAGGGAGCTGGAGAGAGGCTATCGG
 AAGAACCCCTGCAGGTCTGGACACCCCTCAGGAGCAAATTGCACTGCTGGCTCCGAG
 CCCCTCCTTGTGGGCTCCGTACACAGTTGTCATTCACTATGCTGGCAATCTTGGAGAC
 TTTCCACGGATTACAAAAGCACCTACAGAACCAAGGAAGGGAACTGAGGATACTAGCAT
 CAACACAATTGAACCCACTGCAGCTAGAATGGCCTTCCCTGCTTGATGAACCTGCCTTC
 AAAGCAAGTTCTCAATCAAATTAGAAGAGAGCCAAGGCACCTAGCCATCTCAAATATGCC
 ATTGGTGAATCTGTGACTGTTGCTGAAGGACTCATAGAAGACCAATTGATGTCACTGTGA
 AGATGAGCACCTATCTGGTGGCCTTCATCATTTCAGATTGAGTCTGTCAGCAAGATAACC
 AAGAGTGGAGTCAGGTTCTGTTATGCTGCGAGACAAGATAAATCAAGCAGATTATGCA
 ACTGGATGCTGCGGTGACTCTTCTAGAATTGAGGATTATTTCAGCATAACCGTATCCCC
 TACCCAAACAAGATCTGCTGCTATTCCGACTTCAGTCTGGTCTATGAAAAGTGGGA
 CTGACAACATATAGAGAATCTGCTCTGTTGATGCGAGAAAAGTCTCTGCATCAAGTAA
 GCTGGCATCACAGTGAATGGCCATGAACCTGGCCCACCAAGTGGTTGGAACCTGGTCA
 CTATGGAATGGTGGATGATCTTGCTAAATGAAGGATTGCCAAATTATGGAGTTGTG
 TCTGTCAGTGTGACCCATCCTGAACCTGAAAGTTGGAGATTATTCTTGGCAAATGTTGA
 CGCAATGGAGGTAGATGCTTAAATTCTCACACCCCTGTCACACCTGTGGAAAATCCTG
 CTCAGATCCGGGAGATGTTGATGATGTTCTTATGATAAGGGAGCTGTATTCTGAATATG
 CTAAGGGAGTATCTTAGCGCTGACGCATTAAAGTGGTATTGTACAGTATCTCCAGAAGCA
 TAGCTATAAAACACAAAAACGAGGACCTGTGGATAGTATGGCAAGTATTGCCCTACAG
 ATGGTGTAAAAGGGATGGATGGCTTGTAGAAGTCACATTCACTTCATCCTCACAT
 TGGCATCAGGAAGGGTGGATGTGAAAACCATGATGAACACTTGGACACTGCAGAGGGTTT
 TCCCCTAATAACCACATCACAGTGAGGGGGAGGAATGTACACATGAAGCAAGAGCACTACATGA
 AGGGCTCTGACGGCGCCCCGGACACTGGGTACCTGTGGCATGTTCCATTGACATTCA
 AGCAAATCCAACATGGTCCATCGATTGGCTAAACAAAACAGATGTGCTCATCCTCCC
 AGAAGAGGTGGAATGGATCAAATTAAATGTGGGCATGAATGGCTATTACATTGTGCAATTAC
 AGGATGATGGATGGACTCTTGACTGGCCTTTAAAGGAACACACACAGCAGTCAGCAGT
 AATGATCAGGGCAAGTCTCATTAACAATGCATTCACTGTCAGCATTGGGAAGCTGTCCAT
 TGAAAAGGCCTGGATTATCCCTGTACTTGAAACATGAAACTGAAATTATGCCGTGTT
 AAGGTTGAATGAGCTGATTCTATGTATAAGTTAATGGAGAAAAGAGATATGAATGAAGTG
 GAAACTCAATTCAAGGCCTCCTCATCAGGCTGCTAAGGGACCTCATTGATAAGCAGACATG
 GACAGACGAGGGCTCAGTCTCAGAGCAAATGCTGCGGAGTGAACACTACTCCTCGCCTGTG
 TGCACAACATCAGCGTGCCTACAGAGGGCAGAAGGCTATTCACTGAAAGTGGAGGAATCC
 AATGGAAACTTGAGCCTGCTGTCACGTGACCTTGGCAGTGGTGTGGGGCCAGAG
 CACAGAAGGCTGGATTCTTCTTATAGTAAATATCAGTTCTTGTCCAGTACTGAGAAA
 GCCAAATTGAATTGCCCTCTGCAGAACCCAAAATAAGGAAAGCTTCATGGCTACTAGAT
 GAAAGCTTAAAGGGAGATAAAATAAAACTCAGGAGTTCCACAAATTCTACACTCATTGG
 CAGGAACCCAGTAGGATACCCACTGGCCTGGCAATTCTGAGGAAAAACTGGAACAAACTTG
 TACAAAAGTTGAACCTGGCTCATCTCCATAGCCACATGGTAATGGGTACAACAAATCAA
 TTCTCCACAAGAACACGGCTTGAAGAGGTTCTCAGCTCTTGAAAGAAAATGG
 TTCTCAGCTCCGTTGTCCAACAGACAAATTGAAGAAAACATGGTTGGATGG
 ATAAGAATTGATAAAATCAGAGTGTGGCTGCAAAGTGAACGTATGTAAAAA
 TTCCTCCCTGCCGGTCTGTTATCTCTAATCACCAACATTGTTGAGTGTATTTC
 ACTAGAGATGGCTGTTGGCTCAACTGGAGATACTTTCTCCTCAACTCATTTTGA
 CTATCCCTGTGAAAAGAATAGCTGTTAGTTTCACTGAATGGCTTTTCACTGAATGGGCTA
 TCGCTACCATGTGTTGTTCATCACAGGTGTTGCCCTGCAACGTAACCCAAAGTGTGGGT
 TCCCTGCCACAGAAGATAAAAGTACCTTATTCTCAAAAAAAAAAAAAAA

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FIGURE 248

MVFLPLKWSLATMSFLLSSLLALLTVSTPSWCQSTEASPKRSDGTPFPWNKIRLPEYVIPVH
YDLLIHANLTTLFWGTTKVEITASQPTSTIILHSHHLQISRATLRKGAGERLSEEPLQVLE
HPPQEIQIALLAPEPLLVLGPLPYTVVIHYAGNLSETFHGFYKSTYRTKEGELRILASTQFEPTA
ARMAFPCFDEPAFKASFISIKIRREPRHLAISNMPLVKSVTVAEGLIEDHFDVTVKMSTYLVA
FIISDFESVSKITKSGVKVSVYAVPDKINQADYALDAAVTLLFYEDYFSIPYPLPKQDLAA
IPDFQSGAMENWGLTTYRESALLFDAEKSSASSKLGITVTVAHELHQWFGNLVTMEWWNDL
WLNEGFAKFMEFVSVSVTHPELKVGDYFFGKCFDAMEVDALNSSHPVSTPVENPAQIREMFD
DVSYDKGACILNMLREYLSADAFKSGIVQYLQKHSYKNTKNEDLWDSMASICPTDGVKGMDG
FCSRSQHSSSSSHWHQEGVDVKTMNTWTLQRGFPLITITVRGRNVHMKQEHYMKGSDGAPD
TGYLWHVPLTFITSKSNMVHRFLKTDTVLILPEEEWIKFNVGMNGYYIVHYEDDGWDSDL
TGLLKGTHTAVSSNDRASLINNAFQLVSIGKLSIEKALDLISLYLKHETEIMPVFQGLNELIP
MYKLMEKRDNEVETQFKAFIIRRDLIDKQTWTDEGSVSEQMLRSELLLLACVHNYQPCV
QRAEGYFRKWKESNGNLSLPVDVTЛАVFAVGAQSTEGWDFLYSKYQFSLSSTEKSQIEFALC
RTQNKEKLQWLLDESFKGDKIKTQEFPQILTLIGRNPVGYPLAWQFLRKNWNKLVQKFELGS
SSIAHMVMGTTNQFSTRTRLEEVKGFFSSLKENGSQLRCVQQTIETIEENIGWMDKNFDKIR
VWLQSEKLERM

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FIGURE 249

CAGCCACAGACGGGTCA**ATGAGCGCGT**TATTACTGCTGCCCTCCTGGGTTCATCCTCCCAC
TGCCAGGAGTGCAGGCGCTGCTCTGCCAGTTGGGACAGTCAGCATGTGTGGAAGGTGTCC
GACCTACCCGGCAATGGACCCCTAAGAACACCAGCTGCGACAGCGGCTGGGTCAGGA
CACGTTGATGCTCATTGAGAGCGGACCCAAGTGAGCCTGGTCTCTCCAAGGGCTGCACGG
AGGCCAAGGACCAGGAGCCCCGCGTCACTGAGCACCGATGGGCCCCGCCCTCCCTGATC
TCCTACACCTTCTGTGCGGCCAGGAGGACTTCTGCAACAACTCGTTAACCTCCCTCCGCT
TTGGGCCCCACAGCCCCCAGCAGACCCAGGATCCTTGAGGTGCCAGTCTGCTTGTCTATGG
AAGGCTGTCTGGAGGGACAACAGAAGAGATCTGCCCAAGGGACCACACACTGTTATGAT
GGCCTCCTCAGGCTCAGGGAGGAGGCATCTTCTCCAATCTGAGAGTCCAGGGATGCATGCC
CCAGCCAGGTTGCAACCTGCTCAATGGACACAGGAAATTGGGCCGTGGTATGACTGAGA
ACTGCAATAGGAAAGATTCTGACCTGTATCGGGGACCACCATTATGACACACAGGAAAC
TTGGCTCAAGAACCCACTGATTGGACCACATCGAATACCGAGATGTGCGAGGTGGGCAGGT
GTGTCAGGAGACGCTGCTCATAGATGTAGGACTCACATCAACCTGGTGGGACAAAAG
GCTGCAGCACTGTTGGGCTCAAAATTCCAGAACGACCACATCCACTCAGCCCCCTGGG
GTGCTTGTGCCCTCTATACCCACTTCTGCTCCTCGGACCTGTGCAATAGTGCCAGCAG
CAGCGTTCTGCTGAACCTCCCTCCCTCAAGCTGCCCTGTCCCAGGAGACGGCAGTGT
CTACCTGTGTGCAAGCCCCCTGGAACCTGTTCAAGTGGCTCCCCCGAATGACCTGCCCA
GGGCCACTCATTGTTATGATGGGTACATTCTCATCTCAGGAGGTGGCTGTCCACCAAAAT
GAGCATTCAAGGGCTGCGTGGCCAACCTCAGCTTGTGAACCACACCAGACAAATCG
GGATCTTCTCTGCGCGTGAGAACGCGTATGTGCGAGCCTCCTGCCCTCAGCATGAGGGAGGT
GGGGCTGAGGGCCTGGAGTCTCTCACTTGGGGGTGGGCTGGCACTGCCCAAGCGCTGT
GTGGGGAGTGGTTGCCCTCTGCT**TA**ACTCTATTACCCCCACGATTCTCACCGCTGCTGA
CCACCCACACTCAACCTCCCTCTGACCTCATAACCTAATGCCCTGGACACCAGATTCTTC
CCATTCTGTCCATGAATCATCTTCCCCACACACAATCATTCATATCTACTCACCTAACAGCA
ACACTGGGGAGAGCCTGGAGCATCCGGACTTGCCTATGGGAGAGGGACGCTGGAGGAGTG
GCTGCATGTATCTGATAATACAGACCCTGTCCCTTCA

FIGURE 250

MSAVLLLALLGFILPLPGVQALLCQFGTVQHVWKVSDLPRQWTPKNTCDGLGCQDTLMLI
ESGPQVSLVLSKGCTEAKDQEPRVTEHRMGPGLSLISYTFVCRQEDFCNNLVNSLPLWAPQP
PADPGSLRCPVCLSMEGCLEGTEEICPKGTTHCYDGLRLRGGGIFSNLRVQGCMPQPGCN
LLNGTQEIGPGVGMTCNRKDFTCHRGTTIMTHGNLAQEPTDWTTSNTEMCEVGQVCQETL
LLIDVGLTSTLVGPKGCVGAQNSQKTTIHSAPPGVLVASYTHFCSSDLCNSASSSVLLN
SLPPQAAPVPGDRQCPTCVQPLGTCSSGSPRMTCPRGATHCYDGYIHLSGGGLSTKMSIQGC
VAQPSSFLLNHTRQIGIFSAREKRDVQPPASQHEGGGAEGLESLTWGVGLALAPALWWGVVCPSC

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FIGURE 251

GCGACGGGCAGGACGCCCGTTCGCCTAGCGCGTGCAGGAGTTGGTGCCTGCCTGCGCT
CAGGATGAGGGGAATCTGGCCCTGGTGGCGTTCTAACAGCCTGGCCTCCTGTCACTGCTG
CCATCTGGACATCCTCAGCCGGCTGGCGATGACGCCTGCTCTGTGCAGATCCTCGTCCCTGG
CCTCAAAGGGATGCAGGGAGAGAAGGGAGACAAAGGCAGCCCCGGACGGCCTGGAAGAGTCG
GCCACGGAGAAAAGGAGACATGGGGACAAAGGACAGAAAGGCAGTGTGGGTGTCAT
GGAAAAATTGGTCCCATTGGCTCTAAAGGTGAGAAAGGAGATTCCGGTGACATAGGACCCCC
TGGTCCTAATGGAGAACCAAGGCCTCCCATGTGAGTGCAGCCAGCTGCGCAAGGCCATGGGG
AGATGGACAACCAGGTCTCTCAGCTGACCAGCGAGCTCAAGTCATCAAGAATGCTGTCGCC
GGTGTGCGCGAGACGGAGAGCAAGATCTACCTGCTGGTGAAGGAGGAGAAGCGCTACGCCA
CGCCCAGCTGTCCTGCCAGGGCCGGGGCACGCTGAGCATGCCAAGGACGAGGCTGCCA
ATGGCCTGATGCCGATACCTGGCGCAAGCCGGCTGGCCGTCTTCATCGGCATCAAC
GACCTGGAGAAGGAGGGCGCTTGTACTCTGACCACTCCCCATGCGGACCTCAACAA
GTGGCGCAGCGGTGAGCCAACAATGCCTACGACGAGGAGGACTGCGTGGAGATGGTGGCCT
CGGGCGGCTGGAACGACGTGGCCTGCCACACCACCATGTACTTCATGTGTGAGTTGACAAG
GAGAACATTGAGCCTCAGGCTGGGCTGCCATTGGGGCCCCACATGTCCCTGCAGGGTT
GGCAGGGACAGAGCCCAGACCATGGTGCAGCCAGGGAGCTGCCCTCTGTGAAGGGTGGAG
GCTCACTGAGTAGAGGGCTGTTCTAAACTGAGAAAATGCCCTATGCTTAAGAGGAAATG
AAAGTGTTCCTGGGTGCTCTGAAGAAGCAGAGTTTCAATTACCTGTATTGTAGCCCCA
ATGTCATTATGTAATTATTACCCAGAATTGCTCTTCCATAAAGCTTGTGCCTTGTCCAAGC
TATACAATAAAATTTAAGTAGTGCAGTAGTTAAGTCCAAAAAAAAAAAAAA

FIGURE 252

MRGNLALVGVLISLAFLSLLPSGHPQPAGDDACSVQILVPGLKGDAGEKGDKGAPGRPGRVG
PTGEKGDMGDKGQKGSGVGRHGKIGPIGSKGEKGDSGDIGPPGPNGEPGLPCECSQLRKAIGE
MDNQVSQLTSELKFIFKNAVAGVRETESKIYLLVKEEKRYADAQLSCQGRGGTLSMPKDEAAN
GLMAAYLAQAGLARVFIGINDLEKEGAFVYSDHSPMRTFNKWRSGEPNNAYDEEDCVERVAS
GGWNDVACHTTMYFMCEFDFKENM

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FIGURE 253

AGTGACTGCAGCCTCCTAGATCCCTCCACTCGTTCTCTTGCAGGAGCACGGCAG
CACCAAGTGTGAGGGAGCAGGCAGCGTCTAGCCAGTCCTGATCCTGCCAGACCACC
CAGCCCCGGCACAGAGCTGCTCACAGGCACCATGAGGATCATGCTGCTATTACAGCCAT
CCTGGCCTTCAGCCTAGCTCAGAGCTTGGGGCTGTCTGTAAGGAGCCACAGGAGGAGGTGG
TTCCTGGCGGGGGCCGCAGCAAGAGGGATCCAGATCTCTACCAGCTGCTCCAGAGACTCTC
AAAAGCCACTCATCTCTGGAGGGATTGCTCAAAGCCCTGAGCCAGGCTAGCACAGATCCTAA
GGAATCAACATCTCCCAGAACGTGACATGCATGACTTCTTGTGGACTTATGGCAAGA
GGAGCGTCCAGCCAGAGGGAAAGACAGGACCTTCTACCTTCAGTGAGGGTTCCCTGGCCC
CTTCATCCAATCAGCTTGGATCCACAGGAAAGTCTCCCTGGAACAGAGGAGCAGAGACC
TTTTAAGACTCTCCTACGGATGTGAATCAAGAGAACGTCCCCAGCTTGGCATCCTCAAGT
ATCCCCCGAGAGCAGAACAGGTACTCCACTTCCGGACTCCTGGACTGCATTAGGAAGACCTC
TTTCCCTGTCCCAATCCCCAGGTGCGCACGCTCCTGTTACCTTCTCTTCCCTGTTCTGT
AACATTCTTGTGCTTGACTCCTCTCCATCTTCTACCTGACCTGGTAGGAAACTGCA
TAGTGAATATCCCCAACCCAAATGGCATTGACTGTAGAATACCTAGAGTTCTGTAGTGT
CCTACATTAAAAATAATGTCTCTCTATTCCCAACAATAAGGATTTGCATATGAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 254

MRIMLLFTAILAFSLAQSGAVCKEPQEEVPGGGRSKRDPDLYQLLQQLFKSHSSLEGLLK
ALSQASTDPKESTSPEKRDMDFFVGLMGKRSVQPEGKTGPFLPSVRVPRPLHPNQLGSTGK
SSLGTEEQRPL

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FIGURE 255

GGCGTCTCCGGCTGCTCCTATTGAGCTGTCTGCTCGCTGTGCCCGCTGTGCCTGCTGTGCC
CGCGCTGTCGCCGCTGCTACCGCGTCTGCTGGACGCCAGCGAGCTGGTGATTG
GAGCCCTGCCAGAGCTCAAGGCCAGCTCTGCCAGGAGGCCAGGCTGCCCGTGAGTC
CCATAGTTGCTGCAGGAGTGGAGCCATGAGCTGCCTGGTGTCATCCCCTGGGGC
TGCTGTTCTGGTCTGCCGATCCAAAGGCTACCTCCTGCCAACGTCACTCTTAGAGGAG
CTGCTCAGCAAATACCAGCACAAACGAGTCTCACTCCGGTCCGAGAGCCATCCCCAGGGA
GGACAAGGAGGAGATCCTCATGCTGCACAACAAGCTTCGGGCCAGGTGCAGCCTCAGGCCT
CCAACATGGAGTACATGGTGAGGCCGGCTCCGGCCGAGAGGCTGGCACCGGGGTGGGC
CTGGGCCACCAGCCTGCTCTGTTCCCCAGCCAGCTCTGTTCCCCAGCCAGTGCCTGATGG
CTGGCTCAGGGTCTCCTCTGGCAGGGAGGATCCGGCTCTGTTCTGTTCTGTTCTGTT
TTGAGACAGGGTCTCACTCTGCCACTGACGCTGGAGTGAATGGACAATCGTCATGCCCTG
AAACCTTAGACTCCGGGTTAAGCGATCCTGCTCAGCCTCCAAGTAGCTGGAACACAG
GCATGCACCATGGTGCCAGCTAGATTAAATATTGTGGAGATGGGGTCTGCTACGT
TGCCCAGGCTGGTCTTGAACCTCAGGCTCAAGCAATCCTCCTGCCTCAGCCTCTCAAAGTG
CTAGGATTATAGGCATGAGTCACCCGTCTGGCTCTGGCTCTGTTCTTAACATTCTGCCAAA
ACAACACACGTGGTTCCCTGTGCAGAGCCTGCCTGTTGCCTCATGTCACCTGGTAGC
TCCACTGGAACACAGCTCAGCCTTCCCACCTGGAGGCAGAGTGGGGAGGGGCCAGGG
CTGGGCTTGCTGATGCTGATCTCAGCTGCCACAGCTAGCTGCACCACCCCTGACTTCTC
CTTAGCCGTGTGAGCCTCACTTCCACTGGAGAGTCCTCCTCGCGTGGTGCATGACT
GTGAGATAAGTCGAGGCTGTGAAGGGCCGGCACAGACTGACCTGCCTCCCCAACCCCTAGG
CTTGCTAACCGGAAAGGAGCTAACGGTGACAGAAGACAGCCAAGGTCAACCCCTCCGGT
GATTGTGATGGGTGTTCCAGGTGTGGTTGGCGATGCTGCTACTTGACCCCAAGCTCCAGTG
TGGAAACTTCCCTGGCTGGTTCCAGAAGTACAGAGGAATGGACCACAGTCTCCAGG
GTCCCTCCTCGTCCACCAACGGGAGCCTCCACCTGGCATCCGTAGCTATGAATGGCTT
TTAACAAACCAACGTCCCAGCCTGGTAACATGGTAAAGCCCCGTCTACAAAAAAATC
CAAGTTAGCCGGCATGGTGGTGCACCTGTAGTCCCAGCTGCAGTGGACTGAGGTGGAG
GTGGAGGTGGGGGTGGGAGCTGAGGAAGGAGGATGCTTGAACGCCAGGCTGGAAAGTCGAGGCTGC
AGTGAGCTGAGATTGCACCACTGCACTCCAGCCTGGTGACAGAGCAAGACCCTGTCTAAAAA

FIGURE 256

MSCVLGGVIPLGLLFLVCGSQGYLLPNVTLLEELLSKYQHNESHSRVRRAIPREDKEEILML
HNKLRGQVQPQASNMEYMVSAAGSGRRGWHRGWGLGHQPALFSQLCSPASACDGWLKVSSGR
GGSRLCSVLFVCETGSHSATDAGVQWHNRHALKP

FIGURE 257

AAGGAGAGGCCACCGGGACTTCAGTGTCTCCTCCATCCCAGGAGCGCAGTGGCCACTATGGG
GTCTGGGCTGCCCTTGTCCTCCTCTTGACCCCTGGCAGCTCACATGGAACAGGGCCGG
GTATGACTTTGCAACTGAAGCTGAAGGAGTCTTGACAAATTCCCTCATGAGTCCAGC
TTCCTGGAATTGCTTGAAAAGCTCTGCCTCCTCCATCTCCCTCAGGGACCAGCGTCAC
CCTCCACCATGCAAGATCTAACACCATGTTGTCTGCAACACATTGACAGCCATTGAAGCCTG
TGTCCCTCTGGCCCGGGCTTTGGGCCGGGATGCAGGAGGCAGGCCCGACCCTGTCTT
CAGCAGGCCACCCCTGAGTGGCAATAAATAATTGGTATGCTG

FIGURE 258

MGSGPLVLLTLLGSSHGTGPGMTLQLKLKESFLTNSSYESSFLELLEKLCLLHLPSGTS
VTLHHARSQHHVVVCNT

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FIGURE 259

AATTGTATCTGTGTAATGTTAAAACAAACGAAATAAAAGAAGGAAAAACTTCTGAGTT
CAAAAACAACAGACTAGTACTCTAAAGAACTCTTAAAACAATTAACTGTTAGGATTGCAGT
TATGATTGGATATTATTAATTCTGTTCTGATGTGGGTTCCACTGTGTTCTGTGC
TATTAATATTCACCATTGCAGAAGCTTCATTCACTGTTGAAAATGAATGCTTAGTGGATCTG
TGCCTCTTACGCATATGTTACAAATTATCTGGAGTCCTAATCAATGCAGAGTCCCCTCCC
CTCCGATTGTTCTAAAT**AA**ATTGAAAGATGTCTGCTGGAAAAAGGCATGTATTAAATCTG
TATGATTCTCAACCATCTTAGTTGGAAAGGTCTTGAAAGCCAATGGAAATACTTTTTT
TTTCTGGCACTAATCAAGTGAGTGTACCTTTCACTTAGTAGGATGTGTTACGCTA
GTAAAATAGAAACCTGTGTTATTCTCAGGTATTTAGAAACAAACAGCCATCATTATT
ATGTGTGTGTTCTGGCTGTATTCAAAATTATATTTGGCTATCAAATATTACTTCAT
TCAATATAAATAACAATAGTAGAAGTTGTTACTTAGATATGCTTCTAGTTGCATTTCTC
AGCCTATGTAAGACTACTTGTGTAATAGCCTTGAAATTACAGTACTGTCTCTACTA
TCTTCAGATTACTGATTCAAATAACCAATTATGTTGTAATTGATATTAATAAAACCAGA
ATAAAAGTTCATATCTACCC

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FIGURE 260

MIGYYLILFLMWGSSTVFCVLLIFTIAEASFVENECLVDLCLLRICYKLSGVPNQCRVPLP
SDCSK

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FIGURE 261

GAGGATTGCCACAGCAGCGGATAGAGCAGGAGAGCACCACGGAGCCCTTGAGACATCCTT
GAGAAGAGCCACAGCATAAGAGACTGCCCTGCTGGTTGCAGGATGATGGTGGCCCTT
CGAGGAGCTCTGCATTGCTGGTCTGTCAGCTTTCTGCCCGCCGAGTGTAC
CCAGGACCCAGCATGGTGCATTACATCTACAGCGCTTCGAGTCTGGAGCAAGGGCTGG
AAAAATGTACCCAAGCAACGAGGGCATACTCAAGAAATTCAAGAGTCTCAAAAAATATA
TCTGTCATGCTGGAGATGTCAGACCTACACAAGTGAGTACAAGAGTGCAGTGGTAACCTT
GGCACTGAGAGTTGAACGTGCCAACGGGAGATTGACTACATACAATACCTCGAGAGGCTG
ACGAGTGCATCGTATCAGAGGACAAGACACTGGCAGAAATGTTGCTCCAAGAAGCTGAAGAA
GAGAAAAAGATCCGGACTCTGCTGAATGCAAGCTGTGACAACATGCTGATGGCATAAAAGTC
TTTGAAAATAGTGAAGAAGATGATGGACACACATGGCTTTGGATGAAAGATGCTGTCTATA
ACTCTCAAAGGTGTACTTATTAAATTGGATCCAGAAACAACACTGTTGGAAATTGCAAAC
ATACGGGCATTATGGAGGATAACACCAAGCCAGCTCCCCGGAAGCAAATCCTAACACTTTC
CTGGCAGGGAACAGGCCAAGTGATCTACAAAGGTTCTATTTCATAACCAAGCAACCTT
CTAATGAGATAATCAAATATAACCTGCAGAAGAGGACTGTGGAAGATCGAATGCTGCTCCA
GGAGGGTAGGCCGAGCATTGGTTACCAGCACTCCCCCTCAACTTACATTGACCTGGCTGT
GGATGAGCATGGCTCTGGGCCATCCACTCTGGGCCAGGCACCCATAGCCATTGGTTCTCA
CAAAGATTGAGCCGGCACACTGGAGTGGAGCATTGATGGGATACCCATGCAGAAGCCAG
GATGCTGAAGCCTCATCCTCTGTGTTCTCTATGTGGTCTACAGTACTGGGGCCA
GGGCCCTCATCGCATCACCTGCATCTATGATCCACTGGGCACTATCAGTGAGGAGGACTTGC
CCAACCTGTTCTCCCCAAGAGACCAAGAAGTCACCTCATGATCCATTACAACCCCAGAGAT
AAGCAGCTCTATGCCTGGAATGAAGGAACAGATCATTACAAACTCCAGACAAAGAGAAA
GCTGCCTCTGAAGTAATGCAATTACAGCTGTGAGAAAGAGCACTGTGGCTTGGCAGCTGTC
TACAGGACAGTGAGGCTATGCCCTTCACAATATAGTATCCCTCTAATCACACACAGGAAG
AGTGTGAGAAGTGGAAATACGTATGCCCTTCCAAATGTCAC TGCCCTAGGTATCTTC
CAAGAGCTTAGATGAGAGCATATCATCAGGAAAGTTCAACAAATGTCATTACTCCCCAAA
CCTCCTGGCTCTCAAGGATGACCACATTCTGATACAGCCTACTTCAGCCTTTGTTTACT
GCTCCCCAGCATTACTGTAACTCTGCCATCTTCCCTCCCACAATTAGAGTGTATGCCAGC
CCCTAATATTCAACCCTGGCTTTCTCTCCCTGGCCTTGCTGAAGCTTCCCTCTTTT
CAAATGCTATTGATATTCTCCATTTCACTGCCAACTAAATACTATTAAATATTCTTT
CTTTCTTTCTTTTGAGACAAGGCTCACTATGTTGCCAGGCTGGTCTCAAACCTCC
AGAGCTCAAGAGATCCTCCTGCCCTAGCCTCAAGTACCTGGGATTACAGGCATGTGCCAC
CACACCTGGCTAAAATACTATTCTTATTGAGGTTAACCTCTATTCCCTAGCCCTGTC
CTTCCACTAAGCTGGTAGATGTAATAATAAAAGTAAAATATTACATTGAATATCGCTTT
CCAGGTGTGGAGTGTGACATCATTGAATTCTGTTCACCTTGTGAAACATGCACAAG
TCTTACAGCTGTCAATTAGAGTTAGGTGAGTAACACAATTACAAAGTGAAGATAACAGC
TAGAAAATACTACAAATCCCATAGTTTCCATTGCCAAGGAAGCATCAAATACGTATGTT
TGTTCACCTACTCTTATAGTCATGCGTTCATCGTTCAAGCTAAAATAATAGTCTGTCCC
TTTAGCCAGTTTCATGTCAGCACAAGACCTTCAATAGGCCCTTCAATGATAATTCTCC
AGAAAACCAAGCTAAGGGTGAGGACCCAACTCTAGCCCTCTTGTGCTGCTCTGT
TTCTCTTTCTGCTTAAATTCAATAAAAGTGACACTGAGCAAAAAAAAAAAAAA

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FIGURE 262

MMVALRGASALLVLFLAAFLPPPQCTQDPAMVHYIYQRFRVLEQGLEKCTQATRAYIQEFQE
FSKNISVMLGRCQTYTSEYKSAVGNLALRVERAQREIDYIQYLREADECIVSEDKTLAEMLL
QEAEKKIRTLLNASCDNMLMGIKSLKIVKKMMDTHGSWMKDAVYNSPKVYLLIGSRNNTV
WEFANIRAFMEDNTKPAPRKQILTLSWQGTGQVIYKGFLFFHNQATSNEIIKYNLQKRTVED
RMLLPGGVGRALVYQHSPSTYIDLAVDEHGLWAIHSGPGTHSHLVLTKIEPGTLGVEHSWDT
PCRSQDAEASFLLCGVLYVVYSTGGQGPHRITCIYDPLGTISEEDLPNLFFPKRPRSHSMIH
YNPRDKQLYAWNENQIIYKLQTKRKLPLK

FIGURE 263

GGGCGCCCGCGTACTCACTAGCTGAGGTGGCAGTGGTTCCACCAACATGGAGCTCTCGCAGA
TGTGGAGCTCATGGGCTGTCGGTGTGCTGGGCTGCTGGCCCTGATGGCGACGGCGGC
GTAGCGCGGGGGTGGCTGCGCGGGGGAGGAGAGGGAGCGGCCGCCCTGCCAAAAAGC
AAATGGATTTCACCTGACAAATCTCGGGATCCAAGAAGCAGAAACAATATCAGCGGATT
GGAAGGAGAACGCTCAACACACAACCTCACCCACGCCCTGGCTGCAGCTCTGAAGAGC
CACAGCGGGAACATATCTGCATGGACTTAGCAGCAATGGCAAATACCTGGCTACCTGTGC
AGATGATCGCACCATCCGCATCTGGAGCACCAAGGACTTCCTGCAGCGAGAGCACCGCAGCA
TGAGAGCCAACGTGGAGCTGGACCACGCCACCCCTGGTGCCTCAGGCCCTGACTGCAGAGCC
TTCATCGTCTGGCTGGCCAACGGGACACCCCTCCGTCTTCAGATGACCAAGCGGGAGGA
TGGGGGCTACACCTTCACAGCCACCCAGAGGACTTCCTAAAAAGCACAAGGCCCTGTCA
TCGACATTGGCATTGCTAACACAGGAAAGTTATCATGACTGCCCTCAGTGACACCAGTC
CTCATCTGGAGCCTGAAGGGTCAAGTGTCTACCATAACACCAACCAGATGAACAAACAC
ACACGCTGCTGTATCTCCCTGTGGCAGATTGTAGCCTCGTGGCTTCACCCAGATGTGA
AGGTTGGGAAGTCTGTTGGAAAGAAGGGGGAGTCCAGGAGGTGGCGAGCCTTCGAA
CTAAAGGGCACTCCGGCTGTGCACTCGTTGCTTCTCCAACGACTCACGGAGGATGGC
TTCTGTCTCCAAGGATGGTACATGGAAACTGTGGACACAGATGTGGAATACAAGAAGAAGC
AGGACCCCTACTTGCTGAAGACAGGCCGCTTGAAGAGGCGGGTCCGCGCCGTGCCGC
CTGGCCCTCTCCCCAACGCCAGGTCTGGCCTGGCCAGTGGCAGTAGTATTCATCTCTA
CAATAACCCGGCGGGCGAGAAGGAGGAGTGCTTGAGCGGGTCCATGGCAGTGATGCCA
ACTTGTCTTGACATCACTGGCCGCTTCTGGCCTCTGTGGGACCGGGCGGTGCGGCTG
TTTCACAACACTCTGGCACCGAGCCATGGTGGAGGAGATGCAGGGCACCTGAAGCGGGC
CTCCAACGAGAGCACCCGCCAGAGGCTGCAGCAGCAGCTGACCCAGGCCAAGAGACCC
AGAGCCTGGGTGCCCTGAAGAAGTGACTCTGGAGGGCCGGCGAGAGGATTGAGGAGGAG
GGATCTGGCCTCTCATGGCACTGCTGCCATCTTCTCCCATTGAAACTACTCTGTCTACTT
AGTCTCTCTCTCTTGCTGGCTGTGACTCCTCCCTGACTAGTGGCAAGGTGCTTCTTC
CTCCCAGGCCAGTGGTGGAACTGTCCCCACCTGGCACTGAGGAGAATGGTAGAGAGGAG
AGGAGAGAGAGAGAGAATGTGATTTGGCCTTGTGGCAGCACATCCTCACACCCAAAGAAG
TTTGAAATGTTCCAGAACACCTAGAGAACACCTGAGTACTAACAGCAGAGTTGCAAGGA
TGGGAGACTGGATAGCTTCCATCACAGAACTGTGTTCCATAAAAAGACACTAAGGGATT
TCCTCTGGCCTCAGTTCTATTGTAAGATGGAGAATAATCCTCTGTGAACCTTGC
AAGATGATATGAGGCTAACAGAAATATCAAGTCCCAGGTCTGGAAGAAAAGTAGAAAAGAGT
AGTACTATTGTCATGAAAGTGGTAAAGTGGGAACCGAGTGTGCTTGTGAAACCAA
TTAGAAACACATTCTGGAGGCAAAGTTCTGGACTTGATCATACATTATATGGT
TGGGACTCTCTCTGGGAGATGATATCTGTTAAGGAGACCTCTTCAGTTCAAG
TTCATCAGATATTGAGTGGCCACTCTGTGCCAAATAAATATGAGCTGGGATTA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 264

MELSQMSELMGLSVLLGLLALMATAAVARGWLRA GEERSGRPACQKANGFPPDKSSGSKKQK
QYQRIRKEKPQQHNFTHRLLAAALKSHSGNISCMDFSSNGKYLATCADDRTIRIWSTKDFLQ
REHRSMRANVELDHATLVRFSPDCRAFIWVLANGDTLRVFKMTKREDGGYTFTATPEDFPKK
HKAPVIDIGIANTGKFIMTASSDTTVLIWSLKQVLSTINTNQMNNTHAAVSPCGRFVASCG
FTP DVKVWEVCFGKKGEFQEVVRAFELKGHSAAVHSFAFSNDSRRMASVSKDGTWKLWDTDV
EYKKKQDPYLLKTGRFEAAAGAAPCRLALSPNAQVLALASGSSIHLYNTRRGEKEECFERVH
GECIANLSFDITGRFLASCGDRAVRLFHNTPGH RAMVEEMQGHLKRASNESTRQLQQQLTQ
AQETLKSLGALKK

FIGURE 265

TGGCCTCCCCAGCTTGCAGGCACAAGGCTGAGCGGGAGGAAGCGAGAGGCATCTAAGCAGG
CAGTGTTCGCCTCACCCAAAGTGACCATGAGAGGTGCCACCGAGTCTCAATCATGCTCC
TCCTAGTAACTGTGTCTGACTGTGCTGTGATCACAGGGCCTGTGAGCGGGATGTCCAGTGT
GGGCAGGCACCTGCTGTGCCATCAGCCTGTGGCTCGAGGGCTGCGGATGTGCACCCGCT
GGGCAGGAAGGCGAGGAGTGCCACCCGGCAGCCACAAGGTCCCCTTCTCAGGAAACGCA
AGCACCACACCTGTCTTGCTGCCAACCTGCTGTGCTCCAGGTTCCGGACGGCAGGTAC
CGCTGCTCCATGGACTTGAAGAACATCAATTTTAGGCGCTTGCCTGGTCTCAGGATACCCA
CCATCCTTTCCTGAGCACAGCCTGGATTTTATTCTGCCATGAAACCCAGCTCCATGAC
TCTCCCAGTCCCTACACTGACTACCCCTGATCTCTTGTCTAGTACGCACATATGCACACAG
GCAGACATACCTCCCATCATGACATGGTCCCCAGGCTGGCTGAGGATGTCACAGCTTGAGG
CTGTGGTGTGAAAGGTGCCAGCCTGGTTCTCCCTGCTCAGGCTGCCAGAGAGGTGGTA
AATGGCAGAAAGGACATTCCCCCTCCCCTCCCAGGTGACCTGCTCTTTCTGGCCCTG
CCCCCTCTCCCCACATGTATCCCTCGGTCTGAATTAGACATTCCCTGGCACAGGCTCTGGGT
GCATTGCTCAGAGTCCCAGGTCTGGCCTGACCTCAGGCCCTCACGTGAGGTCTGTGAGG
ACCAATTGTGGTAGTTCATCTTCCCTCGATTGGTTAACCTCTAGTTCAGACCACAGAC
TCAAGATTGGCTTCCCAGAGGGCAGCAGACAGTCACCCAAAGGCAGGTGTAGGGAGCCA
GGGAGGCCAATCAGCCCCCTGAAGACTCTGGTCCCAGTCAGCCTGTGGCTGTGGCTGTGA
CCTGTGACCTTCTGCCAGAATTGTCATGCCCTGAGGGCCCCCTTACACACTTACAGT
TAACCACGTAGCCCCAATTCCCACAGCTTTCCATTAAAATGCAAATGGTGGTGGTTCAA
TCTAATCTGATATTGACATATTAGAAGGCAATTAGGGTGTTCCTTAAACAACCTCTTCCA
AGGATCAGCCCTGAGAGCAGGTTGGTACTTGGAGGAGGGCAGTCCTGTCCAGATTGGGG
TGGGAGCAAGGGACAGGGAGCAGGGCAGGGCTGAAAGGGGACTGATTGACACCAGGGAGG
CAACTACACACCAACATGCTGGCTTGAATAAAAGCACCAACTGAAAAAA

FIGURE 266

MRGATRVSIMLLVTVDCAVITGACERDVQCGAGTCCAISLWLRGLRMCTPLGREGEECHP
GSHKVPFFRKHKHTCPCLPNLLCSRFPDGRYRCSDMLKNINF

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FIGURE 267

AGCGCCGGCGTCGGGCGGTAAAAGGCCGCAGAAGGGAGGCACTTGAGAAATGTCTTC
CTCCAGGACCAAGTTCTCACCATGGGATGTGGCCATTGGTGCAGGAGCCCTGGGGC
TGCTGCCTTGGCATTGCTGCTGCCAACACAGACGTGTTCTGTCCAAGCCCCAGAAAGCGG
CCCTGGAGTACCTGGAGGATATAGACCTGAAAACACTGGAGAAGGAACCAAGGACTTCAA
GCAAAGGAGCTATGGAAAAAAATGGAGCTGTGATTATGCCGTGCGGAGGCCAGGCTGTT
CCTCTGAGAGAGAAGCTGCGGATCTGTCCCTGAAAAGCATGTTGGACCAGCTGGCG
TCCCCCTCTATGCAGTGGTAAAGGAGCACATCAGGACTGAAGTGAAGGATTCCAGCCTTAT
TTCAAAGGAGAAATCTCCTGGATGAAAAGAAAAAGTTCTATGGTCCACAAAGGCCGAAGAT
GATGTTATGGGATTATCCGTCTGGAGTGTGGTACAACCTTCCGAGCCTGGAACGGAG
GCTTCTCTGAAACCTGGAAGGAGAAGGCTTCATCCTTGGGGAGTTTGTGGTGGGATCA
GGAAAGCAGGGCATTCTTCTTGAGCACCGAGAAAAAGAATTGGAGACAAAGTAAACCTACT
TTCTGTTCTGGAAGCTGCTAACGATGATCAAACCACAGACTTGGCCTCAGAGAAAAAATGAT
TGTGTGAAACTGCCAGCTCAGGATAACCAGGGACATTCACCTGTGTTCATGGATGTATT
GTTTCCACTCGTGTCCCTAAGGAGTGAGAAACCCATTATACTCTACTCTCAGTATGGATT
TTAATGTATTTAATATTCTGTTAGGCCACTAAGGAAAATAGCCCCAAAACAAGACTGA
AAAAATCTGAAAAACTAATGAGGATTATTAAGCTAAACCTGGAAATAGGAGGCTTAAA
TTGACTGCCAGGCTGGGTGCAGTGGCTCACACCTGTAATCCCAGCACTTGGAGGCCAAGG
TGAGCAAGTCACTTGAGGTCGGAGTTCGAGACCAGCCTGAGCAACATGGCAAACCCCGTC
TCTACTAAAATACAAAATCACCGGGTGTGGCAGGCACCTGTAGTCCCAGCTACCCG
GGAGGCTGAGGCAGGAGAATCACTGAACCTGGAGGTGGAGGTTGCGGTGAGCTGAGATCA
CACCACTGTATTCCAGCCTGGGTGACTGAGACTCTAACTAA

FIGURE 268

MSFLQDPSFFTGMWSIGAGALGAAALALLANTDVFLSKPQKAALEYLEDIDLKTEKEPR
TFKAKELEKNGAVIMAVRRPGCFLCREEAADLSSLKSMLDQLGVPLYAVVKEHIRTEVKDF
QPYFKGEIFLDEKKKFYGPQRRKMMFMGFIRLGWYNFFRAWNGGFSGNLEGEGFILGGVFV
VGSGKQGILLEHREKEFGDKVNLLSVLEAKMIKPQTLASEKK

FIGURE 269

ACGGACCGAGGGTTCGAGGGAGGGACACGGACCAGGAACCTGAGCTAGGTCAAAGACGCCG
GGCCAGGTGCCCGTCGCAGGTGCCCTGGCCGGAGATGCGGTAGGAGGGCGAGCGCGAGA
AGCCCCTCCTCGCGCTGCCAACCGCCACCCAGCCCATGGCGAACCCGGGCTGGGCTG
CTTCTGGCGCTGGGCTGCCGTTCCCTGCTGGCCGCTGGGCGAGCCTGGGCAAATACA
GACCACTTCTGCAAATGAGAATAGCACTGTTGCCTCATCACCAGCTCCAGCTCCGATG
GCAACCTGCGTCCGGAAGCCATCACTGCTATCATCGTGGTCTCTCCCTTGGCTGCCTTG
CTCCTGGCTGTGGGCTGGCACTGTTGGTGGGAAGCTTCGGGAGAACGGCAGACGGAGGG
CACCTACCGGCCAGTAGCGAGGAGCAGTTCTCCATGCAGCCGAGGCCGGCCCTCAGG
ACTCCAAGGAGACGGTGCAGGGCTGCCATCTAGGTCCCTCTCCTGCATCTGTCTCC
CTTCATTGCTGTGTGACCTTGGGAAAGGCAGTGCCCTCTGGGAGTCAGATCCACCCAG
TGCTTAATAGCAGGAAGAAGGTACTTCAAAGACTCTGCCCTGAGGTCAAGAGAGGATGGG
GCTATTCACTTTATATTTATATAAAAATTAGTAGTGAGATGTAAAAAAAAAAAAAAA

FIGURE 270

MANPGLLLLALGLPFLARWGRAWGQIQTTSANENSTVLPSSSTSSSDGNLRPEAITAIIV
VFSLLAALLLAVGLALLVRKLREKRQTEGTYRPSSEQFSHAAEARAPQDSKETVQGCLPI

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FIGURE 271

AATATATCATCTATTATCATTAATCAATAATGTATTCTTTATTCCAATAACATTGGGTT
TTGGGATTTAATTTCAAACACAGCAGAATGACATTCTGTCACTATTATTATTGTTG
GTATGTGAAGCTATTGGAGATCCAATTAGGAAGCAACACATTGGAGAATGGCTACTTCT
ATCAAGAAATAAGAGAACCAACAGTCACCCACACAATCATCTTAGAAGACAGTGTGACTC
CTACCAAAGCTGCAAAACCACAGGCAAGGGCATAGTTAAAGGACGGAATCTTGACTCAAGA
GGGTTAATTCTTGGTGCTGAAGCCTGGGCAGGGGTGAAAGAAAAACACTTAGATTCAATG
ATTGTAAATTAAAGGCAAATACACATATTAGTATTACCTTAGTGTAAATGTATCCCTGTCTA
TATACAATAAGGTGAAATTATAAGTACCCCTATGCAGTTGGCTGGACAGTTCTAAATTGGACT
TTATTAATTAAAATCAGTAAC TGATTACTGGCTATGTGCTTAGATCTACAGGAGA
TCATATAATTGATAACAATAAAAGAAAAGTGTCTCTCCCCTACAGAATTGACATTAA
ATGCGATACAGTTAGAATAGGAAATATGACATTAGAAAGGAAGAATGACAGGGAGAAAGGAA
AGAAGGGAAAATGTTGCCAAGGAAAAAAA

FIGURE 272

MTFFLSLLLLVCEAIWRSNSGSNTLENGYFLSRNKENHSQPTQSSLEDSVTPTKAVKTGK
GIVKGRNLDSRGLILGAEAWGRGVKKNT

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GCCAGGAATAACTAGAGAGGAACA**ATGGGGTTATT**CAGAGGTTTGTTCCTCTAGTTCT
GTGCCTGCTGCCACAGTCAAATACTCCTCATTAAGCTGAATAATAATGGCTTGAGATA
TTGTCATTGTTATAGATCCTAGTGTGCCAGAAGATGAAAAATAATTGAACAAATAGAGGAT
ATGGTACTACAGCTCTACGTACCTGTTGAAGCCACAGAAAAAGATTTTTCAAAA
TGTATCTATATTAACTCTGAGAATTGGAAGGAAATCCTCAGTACAAAAGGCCAAACATG
AAAACCATAAACATGCTGATGTTAGTGTGACCCACTACACTCCCAGGTAGAGATGAACCA
TACACCAAGCAGTTCACAGAATGTGGAGAGAAAGGCGAACATACATTCACTTCACCCCTGACCT
TCTACTTGGAAAAAAACAAAATGAATATGGACCACCCAGGCAAACGTGTTGTCCATGAGTGGG
CTCACCTCCGGTGGGGAGTGTGTTGATGAGTACAATGAAGATCAGCCTTCTACCGTGCTAAG
TCAAAAAAAATCGAAGCAACAAGGTGTTCCGCAGGTATCTCTGGTAGAAATAGAGTTATAA
GTGTCAAGGGAGGCAGCTGCTTAGTGTGAGCATGCAGAATTGATTCTACAAACAAAATGTATG
GAAAAGATTGTCAATTCTTCCTGATAAAAGTACAAACAGAAAAAGCATCCATAATGTTATG
CAAAGTATTGATTCTGTGTTGAAATTGTAACGAAAAAAACCCATAATCAAGAAGCTCCAAG
CCTACAAAACATAAGTCAATTAGTAAAGTACATGGGAGGTGATTAGCAATTCTGAGGATT
TTAAAAACACCATACCCATGGTGACACCCTCCACCTGTCTCATTGCTGAAGATC
AGTCAAAGAATTGTGTGTTAGTCTTGATAAGTCTGGAAAGCATGGGGTAAGGACCGCCT
AAATCGAATGAATCAAGCAGCAAAACATTTCTGCTGCAGACTGTTGAAAATGGATCCTGGG
TGGGATGGTCACTTGATAGTACTGCCACTATTGTAATAAGCTAACTCCAAATAAAAGC
AGTGATGAAAGAACACACTCATGGCAGGATTACCTACATATCCTCTGGGAGGAACCTCCAT
CTGCTCTGGAATTAAATATGCATTTCAGGTGATTGGAGAGCTACATTCCAACCTCGATGGAT
CCGAAGTACTGCTGCTGACTGATGGGAGGATAACACTGCAAGTTCTGTATTGATGAAGTG
AAACAAAGTGGGCCATTGTCATTGCTTGGGAAGAGCTGCTGATGAAGCAGTAAT
AGAGATGAGCAAGATAACAGGAGGAAGTCATTGTTGATGAAAGCTCAGAACAATG
GCCTCATTGATGCTTTGGGCTCTTACATCAGGAAATACTGATCTCTCCCAGAAGTCCCTT
CAGCTCGAAAGTAAGGGATTAACACTGAATAGTAATGCTGGATGAACGACACTGTCATAAT
TGATAGTACAGTGGAAAGGACACGTTCTTCTCATCACATGGAACAGTCTGCCCTCAGTA
TTTCTCTGGGATCCCAGTGGACAATAATGAAAATTTCACAGTGGATGCAACTTCCAAA
ATGGCCTATCTCAGTATTCCAGGAACGTGCAAAGGTGGGACTTGGGCATAACATCTCAAGC
CAAAGCGAACCCAGAAACATTAACATTACAGTAACCTCTGAGCAGCAAATTCTCTGTGC
CTCCAATCACAGTGAATGCTAAATGAATAAGGACGTAACAGTTCCCCAGCCAAATGATT
GTTTACGCAGAAATTCTACAAGGATATGTACCTGTTCTGGAGCAATGTGACTGTTTCA
TGAATCACAGAATGGACATACAGAAGTTTGGAACTTTGGATAATGGTGCAGGGCCTGATT
CTTTCAGAATGATGGAGTCTACTCCAGGTATTTCAGCATATACAGAAAATGGCAGATAT
AGCTTAAAAGTTCGGGCTCATGGAGGAGCAAACACTGCCAGGCTAAATTACGGCCTCCACT
GAATAGAGCCCGTACATACCAGGCTGGTAGTGAACGGGAAATTGAAGCAAACCCGCCAA
GACCTGAAATTGATGAGGATACTCAGACCCATTGGAGGATTTCAGCCGAACAGCATCCGGA
GGTGCATTGTTGATCACAGTCCAAAGCCTCCCTGCCTGACCAATACCCACCAAGTCA
AATCACAGACCTGATGCCACAGTTCATGAGGATAAGATTATTCTACATGGACAGCACCAG
GAGATAATTGATGTTGGAAAAGTTCAACGTTATATCATAAGAATAAGTGAAGCAAACCCGCCAA
GATCTAAAGAGACAGTTGATGATGCTCTCAAGTAATAACTGATCTGTCACCAAAGGA
GGCCAACCTCAAGGAAAGCTTGCATTAAACCAAGAAAATCTCAGAAGAAAATGCAACCC
ACATATTATTGCCATTAAAGTATAGATAAAAGCAATTGACATCAAAGTATCCAACATT
GCACAAGTAACCTTGTATTCCCTCAAGCAAATCCTGATGACATTGATCCTACACCTACTCC
TACTCCTACTCCTACTCCTGATAAAAGTCATAATTCTGGAGTTAATATTCTACGCTGGTAT
TGTCTGTGATTGGGCTGTGTAATTGTTAATTGTTAATTGTTAAGTACCACTT**TGA**ACCTTA
ACGAAGAAAAAAATCTCAAGTAGACCTAGAAGAGAGTTTAAAAACAAACATGTAAGT
AAAGGATAATTCTGAATCTAAATTCCATGTCATCAAACCTCATAAAAATAATT
TTAAGATGTCGAAAAGGATACTTGATTAATAAAACACTCATGGATATGAAAAACTGT
CAAGATTAAATTAAATAGTTCATTTATTGTTATTGTTAAGGAAATAGTGTGAAAC
AAAGATCCTTTCTACTGATACTGGTTGTATATTATTGATGCAACAGTTCTGAAAT
GATATTCAAAATTGCATCAAGAAATTAAACATCTATCTGAGTAGTCAAAATAAGTAAA
GGAGAGCAAATAAACACATTGGAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 274

MGLFRGFVFLVLCLLHQSNNTSFIKLNNNGFEDIVIVIDPSVPEDEKIEQIEDMVTTASTY
LFEATEKRFFFKNVSILIPENWKENPQYKRPKHENKHADIVAPPTLPGRDEPYTKQFTEC
GEKGEYIHFTPDLGGKKQNEYGPPGKLFVHEWAHLRGVFDEYNEDQPFYRAKSKKIEATR
CSAGISGRNRVYKCQGGSCLSACRIDSTTKLYGKDCQFFPDKVQTEKASIMFMQSIDSVVE
FCNEKTHNQEAPSLQNIKCNFRSTWEVISNSEDFKNTIPMVTCCCCVFSLLKISQRIVCLV
LDKGSGMGGKDRLNRMNQAAKHFLQTVENGWVGMVHFSTATIVNKLIQIKSSDERNTLM
AGLPTYPLGGTSICSGIKYAFQVIGELHSQDGEVLLTDGEDNTASSCIDEVKQSGAIVH
FIALGRAADEAVIEMSKITGGSHFYVSDEAQNNGLIDAEGALTSGNTDLSQKSLQLESKGLT
LNSNAWMNDTVIIDSTVGKDTFFLITWNSLPPSISLWDPSGTIMENFTVDATSKMAYLSIPG
TAKVGTWAYNLQAKANPETLTITVTSRAANSSVPPITVNAKMNDVNSFPSPMIVYAEILQG
YVPVLGANVTAFIESQNGHTEVLELLDNGAGADSFKNNDGVYSRYFTAYTENGRYSLKVRAG
GANTARLKLRLPPLNRAAYIPGWVVNGEIEANPPREIDEQTTLLEDFSRTASGGAFVVSQV
PSLPLPDQYPPSQITDLDATVHEDIILTWTAPGDNFVGKVQRYIIIRISASILDLRDSFDD
ALQVNNTTDLSPKEANSKESFAFKPENISEENATHIFIAIKSIDKSNLTSKVSNIAQVTLFIP
QANPDDIDPTPTPTPTPDKSHNSGVNISTLVLSVIGSVVIVNFILSTTI

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FIGURE 275

CTCCTTAGGTGGAAACCTGGAGTAGAGTACTGACAGCAAAGACCGGGAAAGACCATACTGCCCG
 GCAGGGGTGACAACAGGTGCATCTTTGATCTCGTGTGGCTGCCCTCCTATTCAAGGAAGAC
 GCCAAGGTAATTGACCCAGAGGAGCAACTGATGTAGCCACCTCCTAACCTCCCTCTTGAAACCCCC
 AGTTATGCCAGGATTTACTAGAGAGTGTCAACTAACAGCAGCGCTCCTCGGCTTAACCTGTGG
 TTGGAGGAGAACCTTGTGGGCTCGCTCTCTTAGCAGTGTCAAGAGTACTGACTTGCTGAGGGT
 GACCAAGAAGAAGGAAAGTCCCCCTTGTGGCTGACATCAGGAAGGCTGTGATGGGAATGAA
 GGTGAAAACCTGGAGATTCACTCAGTCATTGCTCTGCCATGCAAGATCATCCTTAAAGTAGAGA
 AGCTGCTCTGTGTGGGTTAACCTCAAGAGGAGCAACTCGTTCTAGAAGGAAATGGATGCAAGCAGC
 TCGGGGGCCCCAAACGCATGCTCTGTGGCTAGCCAGGGAAAGCCCTCCGTGGGGCCCCGGCT
 TTGAGGGATGCCACCGGTTCTGGACGCATGGCTGATTCTGA**ATGATGATGGTTGCCGGGGCTGCT**
 TCGTGGATTCCGGTGGTTTGCTGGCTCTCTGCTGTGCTATCTCTGTGCTACATGT
 TGGCTGCACCCCAAAGGTGACGAGGAGCAGCTGCCACTGCCAGGGCAACAGCCCCACGGGAAG
 GAGGGTACCAAGGCCGTCCTCAGGAGTGGGAGGAGCAGCACCGCAACTACGTGAGCAGCCTGAAGCG
 GCAGATCGCACAGCTCAAGGAGGAGCTGCAGGAGAGGAGTGTGAGCAGCTCAGGAATGGGAGTACCAAG
 CCAGCGATGCTGCCCTGGCTCGACAGGAGCCCCCAGGAAACCCAGGCCACCTCCTGGCC
 TTCTGCACTCGCAGGTGGACAAGGAGGATGAAATGCTGGCTCAAGCTGCCACAGAGTATGAGC
 AGTGCCTTCGATAGCTTACTCTACAGAAGGTGTACAGCTGGAGACTGCCATTGAATCAGCCTGGAGACC
 AGGAGAACGCTGTGAGGAAGGACAAGCGGGATGAGTTGGGAAGGCATTGAATCAGCCTGGAGACC
 CTGAACAATCCTGCAGAGAACAGCCCCAATCACCGTCCTACAGGCCCTGTGATTCAAGAAGGAT
 CTACCGAACAGAACAGAACAGGACATTGTATGAGCTCACCTCAAAGGGACCACAAACACGAAT
 TCAAACGGCTCATCTTATTGACCAATTAGCCTCATGAAAGTAAAAAGCTCAACATG
 GCCAACACGCTTACATGTTATCGTGCCTCTAGCAAAAGGGTGGACAAGTCCGGCAGTGTGCA
 GAATTTCAGGGAGATGTGATTGAGCAGGATGGGAGTCCATCTCACTGTTTACTTGGGAAAG
 AAGAAAATAATGAAGTCAAAGGAATACTTGAAAACACTTCCAAAGCTGCCAACCTCAGGAACCTTAC
 TTCATCAGCTGAATGGAAATTCTCGGGAAAGGGACTTGATGTTGGAGCCGCTCTGGAAAGGG
 AAGCAACGTCCTCTCTTCTGTGATGTGGACATCTACATCTGAATTCTCAATACGTGTA
 GGCTGAATACACAGCCAGGGAAAGAAGTATTATCCAGTTCTCAGTCAGTACAATCCTGGCATA
 ATATACGGCCACCATGATGCAGTCCCTCCCTGGAACAGCAGCTGGTCATAAGAACAGGAAACTGGATT
 TTGGAGAGACTTGGATTGGGATGACGTGTCAGTATCGTCAGACTTCATCAATATAGGTGGTTG
 ATCTGGACATCAAAGGCTGGGCGGAGAGGATGTGACCTTTATCGCAAGTATCTCCACAGCAACCTC
 ATAGTGGTACGGACGCCTGTGCGAGGACTCTCCACCTCTGGCATGAGAACGCGTGCATGGACGAGCT
 GACCCCCGAGCAGTACAAGATGTGATGCAGTCAGTCAAGGCCATGAACGGAGCATCCACGGCAGCTGG
 GCATGCTGGTGTCAAGGACAGAGATAGGGCTCACCTCGCAAACAGAACAGAACAGAACAGAACAG
 AAAACAT**GA**ACTCCCAGAGAACGGATTGAGGACACTTTTCTTCAATTACTGAAAGTG
 GCTGCAACAGAGAACAGACTTCCATAAAGGAGCACAAAAGAATTGGACTGATGGTCAGAGATGAGAA
 AGCCTCCGATTCTCTCTGTGGCTTTACAACAGAAATCAAATCTCGCTTGCTGCAAAGT
 AACCCAGTTGCACCTGTGAAGTGTCTGACAAAGGCAGAACATGCTTGAGATTAAAGCTTAATGGT
 TGGAGGTTTGATGGTTTACAATACACTGAGACCTGTTTGTGCTCATGAAATATTGATG
 ATTTAAGAGCAGTTGTAAAAATTCATTAGCATGAAAGGCAAGCATATTCTCCTCATATGAATG
 GCCTATCAGCAGGGCTCTAGTTCTAGGAATGCTAAAATATCAGAACGGCAGGAGAGGAGATAGGCTTA
 TTATGATACTAGTGTGACTACATTAAGTAAAATGGACAGAACAGAACACATAAATATCG
 TGTGATTTCTCCCAAGATTAACCAAATAATCTGCTTATCTTTTGTTGCTTAAACTGCT
 CGTCTTCTTCTTCTTAAATGCACTTTTCCCTGTGAGTTAGTCTGCTTATTAATT
 CCACTTGCAAGCCTTACAAGAGAGCACAGTTGGCCTACATTAAATTTAAGAACGAAACTTT
 GAGATGCATTATGAGAACCTTCAGTTCAAGCATCAAATTGATGCCATATCCAAGGACATGCCAAATG
 CTGATTCTGTCAAGGCACTGAATGTCAGGCATTGAGAACATAGGGAAAGGAATGGTTGACTAACAGA
 CGTACAGATACTTCTCTGAAGAGTATTTCGAAGAGGAGCAACTGAACACTGGAGGAAAGAACATG
 ACACCTTCTGCTTACAGAAAAGGAAACTCATTCAGACTGGTGTATCGTGTACCTAAAAGTCAG
 AAACCCACATTCTCCTCAGAACAGTAGGGACCGCTTCTTACCTGTGTTAAATAACCAAAAGTATACCGT
 GTGAACCAAACAACTCTTTCAAAACAGGGTGTCTCCTCGGCTTCTGGCTTCCATAAGAACAGAACATG
 GAGAAAATAATATATATATATATATTGAAAGATCAATCCATCTGCCAGAACATGTTGGGATG
 GAAGTTTGCTACATGTTATCCACCCAGGCCAGGTGGAAAGTAATGAAATTATTTTAAATTAAAGC
 AGTTCTACTCAATCACCAAGATGCTCTGAAAATTGATTTTATTACCATTTCAAACATTTTTAA
 AATAAAACAGTTAACATAGAGTGGTTCTCATTATGTGAAAATTATTAGCCAGCACAGATGCAT
 GAGCTAATTATCTCTTGAGTCCTGCTCTGCTCACAGTAAACTCATTGTTAAAAGCTTCAA
 GAACATTCAAGCTGTTGGTGTAAAAATGCAATTGATTGATTTGACTGGTAGTTATGAAATT
 AATTAAAACACAGGCCATGAATGGAAGGTGGTATTGACAGCTAATAAAATATGATTGATGAA

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FIGURE 276

MMMVRRGLLAWISRVVVLLVLLCCAISVLYMLACTPKGDEEQLALPRANSPTGKEGYQAVLQEWEEQHRNYVSSLKRQIAQLKEELQERSEQLRNGQYQASDAAGLGLDRSPPEKTQADLLAFLHSQVDKAEVNAGVKLATEYAAVPFDSFTLQKVYQLETGLTRHPEEKPVRKDKRDELVEAIESALETLNNPAENSPNHRPYTASDFIEGIYRTERDKGTLYELTFKGDHKHEFKRLILFRPFSPIMKVKNELNMANTLINVIVPLAKRVDKFRQFMQNREMCIEQDGRVHLTVVYFGKEEINEVKGILENTSKAANFRNFTFIQLNGEFSRGKGLDVGARFWKGSNVLLFFCDVDIYFTSEFLNTCRLNTQPGKKVFYPVLFSQYNPGIIYGHDAVPPLEQQLVIKKETGFWRDFGFGMTCQYRSDFINIGGFDDIKGWGGEDVHLYRKYLHSNLIVVRTPVRGLFHLWHEKRCMDELTPEQYKMCMSKTKAMNEASHGQLGMLVFRHEIEAHLRKQKQKTSSKKT

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FIGURE 277

GAAAGAATGTGTGGCTGCTTTCTGGTACTGCCATTGCTGAACCTGTCAACC
AGGTGCAGAAAATGCTTTAAAGTAGACTTAGTCAGAACAGCTCTGGAGATAAGCAT
ATGCCTGGATACCAATGAAGAACCTCTCAAAGCGATGGTAGCTTCTCCATGAGAAAA
GTTCCAACAGAGAACAGAAATTCCCAGTCCTACTTGCAATGTAACCCAGAGGGT
ATCATTCTGGTTGTGGTTACAGACCCCTCAAAAATCACACCCCTGCTGTTGAGGTGC
AATCAGCCATAAGAACATGAACAAGAACCGGATCAACAATGCCTCTTCTAAATGACCAAAC
CTGGAATTTTAAAAATCCCTCACACTGCACCACCCATGGACCCATCTGTGCCCATCTG
GATTATTATTTGGTGTGATATTGCATCATCATAGTTGCAATTGCACTACTGATTTAT
CAGGGATCTGGCAACGTAGAAGAAAGAACAAAGAACCATCTGAAGTGGATGACGCTGAAGAT
AAAGTGTGAAAACATGATCACAAATTGAAAATGGCATCCCTCTGATCCCTGGACATGAAGGG
GGGCATATTAATGATGCCTCATGACAGAGGATGAGAGGCTACCCCTCTGAAGGGCTGT
TGTTCTGCTTCCTCAAGAAATTAAACATTGTTCTGTGACTGCTGAGCATCCTGAAATA
CCAAGAGCAGATCATATATTTGTTCAACCATTCTTCTTGTAAATAAATTGAAATGTGCT
TGAAAGTGAAGCAATCAATTACCCACCAACACCACTGAAATCATAAGCTATTGAC
TCAAAATATTCTAAAATATTTCTGACAGTATAGTGTATAATGTGGCATGTGGTATTG
TAGTTATTGATTAAGCATTAGAAATAAGATCAGGCATATGTATATATTTCACACTTC
AAAGACCTAAGGAAAATAAATTCCAGTGGAGAACATATAATATGGTAGAAATCAT
TGAAAATGGATCCTTGTGACGATCACTTATATCACTCTGTATATGACTAAAGAACAAAAG
TGAGAAGTAATTATTGAAATGGATGGATAAAATGGAATTACTCATATACAGGGTGGAAATT
TTATCCTGTTATCACACCAACAGTTGATTATATATTTCTGAATATCAGCCCTAATAGGAC
AATTCTATTGTTGACCATTCTACAATTGAAAGTCCAATCTGTGCTAACTTAATAAAG
TAATAATCATCTTTAAAAAAAAAAAAAAAAAAAAAA

FIGURE 278

MLWLLFFLVTAIHAELCQPGAENAFKVRSLIRTALGDKAYAWDTNEEYLFKAMVAFSMRKVP
NCREATEISHVLLCNVTQRVSFWFVVTDPSKNHTLPAVEVQSAIRMNKNRINNAFFLNDQTLE
FLKIPSTLAPPMDPSVPIWIIIFGVIFCIIIVAIALLILSGIWQRRRNKEPSEVDDAEDKC
ENMITIENGIPSDPLDMKGGLMMPS

FIGURE 279

AACTCAAACCTCTCTGGAAAACGCGGTGCTGCTCCTCCGGAGTGGCCTGGCAGG
GTGTTGGAGCCCTCGGTCTGCCCGTCCGGTCTCTGGGCCAAGGCTGGTTCCCTC**ATGT**
ATGGCAAGAGCTACTCGTGCAGGTGCTTCTCCTGGCATACAGCTCACAGCTTTGG
CCTATAGCAGCTGTGGAAATTATACCTCCGGTGCTGGAGGCTGTTAATGGGACAGATGC
TCGGTTAAAATGCACTTCTCCAGCTTGCCCTGTGGGTGATGCTCTAACAGTGACCTGGA
ATTTCGTCCTCTAGACGGGGGACCTGAGCAGTTGTATTCTACTACCACATAGATCCCTTC
CAACCCATGAGTGGCGGTTAAGGACCGGGTGTCTGGGATGGAATCCTGAGCGGTACGA
TGCCTCCATCCTCTGGAAACTGCAGTCGACGACAATGGGACATACACCTGCCAGGTGA
AGAACCCACCTGATGTTGATGGGTGATAGGGGAGATCCGGCTCAGCGTCGTGACACTGTA
CGCTTCTCTGAGATCCACTCCTGGCTCTGGCATTGGCTGCCTGTGCACTGATGATCAT
AATAGTAATTGAGTAGTGGCCTCTCCAGCATTACCGAAAAAGCGATGGCCGAAAGAGCTC
ATAAAAGTGGTGGAGATAAAATCAAAGAAGAGGAAAGGCTAACCAAGAGAAAAAGGTCTCT
GTTTATTAGAAGACACAGACT**AA**CAATTAGATGGAAGCTGAGATGATTCCAAGAACAA
GAACCTAGTATTCTGAAGTTAATGGAAACTTTCTTGCTTTCCAGTTGTGACCCGT
TTTCCAACCAGTTCTGCAGCATATTAGATTCTAGACAAGCAACACCCCTCTGGAGCCAGCAC
AGTGCTCCTCCATATCACCAGTCATACACAGCCTCATTATTAAGGTCTATTAAATTCAAGA
GTGTAAATTTTCAAGTGCTCATTAGTTATAAACACAAGAAGCTACATTTGCCCTAA
GACACTACTTACAGTGTATGACTTGTATACACATATATTGGTATCAAAGGGATAAAAGCC
AATTGCTGTTACATTCTTCACTGACGTATTCTCAATTAAAGGTGAGCTAACGCTCCTCGGTG
ATGTGTTACTCTTCTTCCCACATTCTCAATTAAAGGTGAGCTAACGCTCCTCGGTG
TTTCTGATTAACAGTAAATCCTAAATTCAAACGTAAATGACATTTTATTATGTCTC
TCCTTAACATGAGACACATCTGTTACTGAATTCTTCAATATTCCAGGTGATAGATT
TTTGTG

FIGURE 280

MYGKSSTRAVLLLLGIQLTALWPIAAVEIYTSRVLEAVNGTDARLKCTFSSFAPVGDA
WNFRPLDGGPEQFVFYYHIDPFQPMGRFKDRVSDGNPERYDASILLWKLQFDDNGTYTCQ
VKNPPDVGVIGEIRLSVVHTVRFSEIHFLALAIGSACALMIIIVIVVVLFQHYRK
AHKVVEIKSKKEERLNQEKKVSVYLEDTD

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FIGURE 281

GCATTTGTCTGTGCTCCCTGATCTCAGGTACCAACCATGAAGTTCTAGCAGTCCTGGT
ACTCTTGGGAGTTCCATCTTCTGGTCTGCCCAGAATCCGACAACAGCTGCTCCAGCTG
ACACGTATCCAGCTACTGGTCCTGCTGATGATGAAGCCCTGATGCTGAAACCAGCTGCT
GCAACCACACTGCGACCACTGCTGCTCCTACCACTGCAACCACCGCTGCTTCTACCACTGCTCG
TAAAGACATTCCAGTTTACCCAAATGGGTTGGGGATCTCCCGAATGGTAGAGTGTGTCCT
GAGATGGAATCAGCTTGAGTCTTCTGCAATTGGTCACAACATTCATGCTCCTGTGATTTC
ATCCAACTAACCTACCTGCCTACGATATCCCTTATCTCTAACAGTTATTTCTTCAA
ATAAAAAAATAACTATGAGCAACATAAAAAAAAAAAA

FIGURE 282

MKFLAVLVLLGVSIFLVSAQNPTTAAPADTYPATGPADDEAPDAETTAAATTATTAAPTTAT
TAAASTTARKDIPVLPKWVGDLPNGRVCP

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GGACTCTGAAGGTCCCAAGCAGCTGCTGAGGCCCAAGGAAGTGGTTCCAACCTGGACCC
CTAGGGGTCTGGATTGCTGGTTAACAGATAACCTGAGGCAGGACCCATAGGGGA**ATGC**
TACCTCCTGCCCTTCCACCTGCCCTGGTGGTCACGGTGGCTGGTCCCTCCTGCCGAGAGA
GTGTCTGGTCAGGGACGCAGAGGACGCTCACAGACTCCAGCCCTTGTACCGAGAGGAC
ACTTGGCAAGGTCCAGCGATGGTCCGGAGTCCACACACAGACTGGCGGCAGGGCAGGAGGG
GACAGTTCTGTTGCTTGGTGGACAGTAAGAGGGCTTGGCCAGTCCAGGGTGGGGCG
GCAAACCTCCATAAGAACCAAGAGGGTCTGGGCCACAGAGTCATCTGCCAGCTCCT
CTGCTGCTGGCCAGTGGAGTGGCACGAGGTGGGCTTGCCAG**TAA**AACCACAGGCTGG
ATTTGCCCTGCGGCCATGGTCCCTGTCTAGGGCAGCAATTCTAACCTTGTCTCAGGA
CCCCAAAGAGCTTCATTGTATCTATTGATTTTACACATTAGCAATTAAAATGAGAAAT
GGGCCGGGCACGGTGGCTACGCCTGTAATCCCAGCACTTGGGAGGCCAGGGGGTGGAT
CACCTGAGATCAGGAGTTCAAGACCAGCCTGGCAACATGGTGAACCTTGTCTACTAAAAA
TACAAAAAATTAGCCAGGCACAGTGGTGTGCACTGGTAGTCCAGTTACTCGGGAGGCTGAG
GCAGGAAAATCGCTTGAACCCAGGAGGCGGACGTTGCGGTGAGCCGAGATCGGCCGCTGAT
TCCAGCCTGGCGACAAGAGTGAGACTCCATCTCACACA

FIGURE 284

MLPPALPPALVFTVAWSLLAERVSWRDAEDAHLQLQPFVTERTLGKVQRWSGVHTQTGGRAG
GGQFCCAWLDSKRVLASPGWGAANSIKNQRWAPATESSAQLLCCWPVGVARGGALCQ

FIGURE 285

GTCATGCCAGTGCCTGCTCTGTGCCTGCTGGGCCCTGGCAATGGTGACCCGGCCTGCCTCA
GCGGCCCATGGCGGCCAGAACTGGCACAGCATGAGGAGCTGACCCTGCTTTCCATGG
GACCCTGCAGCTGGGCCAGGCCCTCAACGGTGTGTACAGGACCACGGAGGGACGGCTGACAA
AGGCCAGGAACAGCCTGGGTCTCTATGCCGCACAATAGAACTCCTGGGGCAGGAGGT CAGC
CGGGGCCGGATGCAGCCAGGAACCTCGGGCAAGCCTGTTGGAGACTCAGATGGAGGAGGA
TATTCTGCAGCTGCAGGCAGAGGCCACAGCTGAGGTGCTGGGGAGGTGGCCAGGCACAGA
AGGTGCTACGGACAGCGTGCAGCGCTAGAAGTCCAGCTGAGGAGGCCTGGCTGGCCCT
GCCTACCGAGAATTGAGGTCTTAAAGGCTCACGCTGACAAGCAGAGCCACATCCTATGGC
CCTCACAGGCCACGTGCAGCGCAGAGGCCAGATGGTGGCACAGCAGCATCGCTGCGAC
AGATCCAGGAGAGACTCCACACAGCGGCCCTCCAGCCTGAATCTGCCTGGATGGAAC TGAG
GACCAATCATGCTGCAAGGAACACTTCCACGCCCGTGAGGCCCTGTGCAGGGAGGAGCTG
CCTGTTCACTGGATGCCAGGCCGGCCCCACTTCTGAGCACAGAGCAGAGACAGAC
GCAGGCCGGACAAAGGCAGAGGATGTAGCCCATTGGGGAGGGTGGAGGAAGGACATGTA
CCCTTCATGCCTACACACCCCTCATTAAGCAGAGTCGTGGCATTCAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAA

FIGURE 286

MPVPALCLLWALAMVTRPASAAPMGGPELAQHEELTLLFHGTLQLGQALNGVYRTTEGRLTK
ARNSLGLYGRTIELLGQEVSRGDAAQELRASLLETQMEEDIQLQAEATAEVLG
EVQAQKVLRDSVQRLEVQLRSAWLGPAYREFEVLKAHADKQSHILWALTGHVQRQRREMVAQQHRLRQ
IQERLHTAALPA

FIGURE 287

GGCAACATGGCTCAGCAGGCTTGCCCCAGAGCCATGCCAAAGAACATGGACTTGTAAATTGCAT
CCTGGT GATCACCTTA CTCCTGGACCAGACCAGCCACACATCCAGATTAAAAGCCAGGA
AGCACAGCAAACGTCGAGTGAGAGACAAGGATGGAGATCTGAAGACTCAAATTGAAAAGCTC
TGGACAGAAGTCAATGCCTGAAGGAAATTCAAGCCCTGCAGACAGTCTGTCTCGAGGCAC
TAAAGTTACAAGAAATGCTACCTGCTT CAGAAGGTTGAAGCATTCCATGAGGCCAATG
AAGACTGCATTCCAAGGAGGAATCCTGGTTATCCCCAGGAACCTCCGACGAAATCAACGCC
CTCCAAGACTATGGTAAAAGGAGCCTGCCAGGTGTCAATGACTTTGGCTGGCATCAATGA
CATGGTCACGGAAGGCAAGTTGTTGACGTCAACGGAATCGCTATCTCCTCCTCAACTGGG
ACCGTGCACAGCCTAACGGTGGCAAGCGAGAAA ACTGTGTCCTGTTCTCCAATCAGCTCAG
GGCAAGTGGAGTGATGAGGCCTGTCGCAGCAGCAAGAGATA CATATGCGAGTT CACCATCCC
TAAATAGGTCTTCTCCAATGTGTCCTCCAAGCAAGATT CATCATAACTTATAGGTTCATGA
TCTCTAAGATCAAGTAAAAATCATAATT TTACTTATTAAAAAATTGCAACACAAGATCAAT
GTCCCATAGCAATATGATAGCATCAGCCAATTTGCTAACACATTTCTTGGGATTTGCCCT
TCCTGGGTATAGGGATCAGAAATATTGATCCATGTGACGCAGATAAAATGGCTCTGCT
AAACAGACTAAAATTTCTCTCTAGTCTTCACTGTACAAACCCAGTTGTTCAA
AAATCACAGTAGCAATGCAACTCATCACTCTAGAAAAGCAAGCTTAGGCTAC TGAAAGATT
TTCCCTTGGAAAGTTAGCGTATGTTGACTAACAAAATCCCTACATCAGAGACTCTAGGT
GCTATATAATCCAAAATTTCTCTCTAGTCTTCACTGTCCATCTCCTGGACTTGTATCTTGTCT
TTGTCAGCCCATTACCTTATTTGAATTGCTCCATCTCCTGGACTTGTATCTTGTCT
GCCATATCAGAACACAAACCCCTGAAGAGGTTCTGATTGATTTTTTTCTTCATGCC
TACCCCTTTTGGAAAGTTCCAGCCGAATTGAAATGAAATGACAAGGTGTATTTGAT
CAATTTCATTCCCACCATTGCATTACAACCTCTAACTTAAATGGTAACCCATAAGGCATAT
CAAAGAACGAGATTGCATGATAAACGGAAATAGAAAAAAAAGAACCTACATTATTTGCTTT
AGCATCCTTACTCTCACCTTTATGAGATTGAGAGTGGACTTACATTCCCTTTACATT
TCGTATATTATTTTTAGCCATCATTATATGTTAAGTCTATTATGGCAACCAATCTT
TGGAAAGCTGAAAATGAAATTAAAGAACATGCTATCTGGAAAATTGCATACGTCTGTGCAATT
TTTTATTCTGCCTAGTGCCTATTCTGCTTAACTAGATTGTACAAAATAACTCATTGCT
TAATATCAAATTACAAAGTTAGACTTGGAGGGAAATGGCTTTAGAAGCAAACAATT
AAATATATTGTTCTCAAATAATAGTGTAAACATTGAATGTGTTGTGAACAAATAT
CCCACCTTGCAAACCTTAACTACACATGCTGGAAATTAGTTAGCTGTTTCATTGCTCA
ATAATAAAGCCTGAATTCTGATCAATAAAAAAAAAAAAAAAA

FIGURE 288

MAQQACPRAMAKNGLVICILVITLLLQTTTSHTSRLKARKHSKRRVRDKDGDLKTQIEKLWT
EVNALKEIQALQTVCLRGTKVHKCYLASEGLKHFHEANEDCISKGGILVIPRNSDEINALQ
DYGKRSLPGVNDFWLGINDMVTEGKFVDVNGIAISFLNWDRAQPNGGKRENCVLFSQSAQGK
WSDEACRSSKRYICEFTI PK

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FIGURE 289

GCGAGGACCGGGTATAAGAAGCCTCGTGGCCTGCCCGGGCAGCCGCAGGTTCCCCGCGC
CCCGAGCCCCCGGCCATGAAAGCTCGCCGCCCTCCTGGGCTCTGCGTGGCCCTGTCC
GCTCCGCTGCTGCTTCTTAGTGGCTCGCCAAGCCTGTGGCCCAGCCTGTCGCTGCGCTG
GAGTCGGCGGGAGGCCGGGGACCTGGCCAACCCCTCGGCACCCCTAACCCGCT
GAAGCTCCTGCTGAGCAGCCTGGCATCCCCGTGAACCACCTCATAGAGGGCTCCAGAAGT
GTGTGGCTGAGCTGGTCCCCAGGCCGTGGGGCGGTGAAGGCCCTGAAGGCCCTGCTGGG
GCCCTGACAGTGTTGGCTGAGCCGAGACTGGAGCATCTACACCTGAGGACAAGACGCTGCC
CACCCCGAGGGCTGAAAACCCCGCCGCCGGGAGGACCGTCCATCCCCTCCCCGGCC
CTCAATAAACGTGGTTAAGAGCAAAAAAAAAAAAAAA
AAAAAAAAAAAAA

FIGURE 290

MKLAALLGLCVALSCSSAAAFLVGSAKPVAQPVALESAAEAGAGTLANPLGTLNPLKLLLS
SLGIPVNHLIEGSQKCVAELGPQAVGAVKALKALLGALTIVFG

FIGURE 291

TGAAGGACTTTCCAGGACCCAAGGCCACACACTGGAAGTCTTCAGCTGAAGGGAGGCACCTCCTGCTCTCCGTCTCGTCTCTGCTCTCGCAGCTCAGTCGCCAGAGACCCCAGCCCCTCAGAACCAGACCAGCAGGGTAGTGCAGGCTCCCAGGGAGGAAGAGGAAGATGAGCAGGAGGCCAGGAGAAGGGAGACTCAAACCTCGGATTCAAGCTGGCTGATGGCCAGCAGCAGCTTCAACATGGCTTCTCTCCATTGGCATGTCCATTGGCCATGACAGGCTTGATGCTGGGGCCAAGGGCCGACTGAAACCCAGATCAAGAGAGGGCTCACTTGCAAGGCCCTGAAGCCCACCAAGCCCAGGACTCCTGCCTCCCTCTTAAGGGACTCAGAGAGACCCCTCTCCGCAACCTGGAACCTGGCCTCTCACAGGGGAGTTTGCCCTCATCCACAAGGATTTGATGTCAAAGAGACTTTCTCAATTATCCAAGAGGTATTTGATACAGAGTGCCTATGAATTTCGCAATGCCTCAAGGCCAAAAGGCTCATGAATCATTACATTAACAAAGAGACTGGGGAAAATTCCAAACTGTTGATGAGATTAATCCTGAAACCAAATTAAATTCTGTGGATTACATCTGTTCAAAGGAAATGGTTGACCCATTGACCCTGTCTCACCGAAGTCGACACTTCCACCTGGACAAGTAAAGACCATTAAGGTGCCATGATGTACGGTGCAGGCAAGTTGCCTCCACCTTGACAAGAACTTCGTTGTATGTCTCAAACCTGCCCTACCAAGGAAATGCCACCATGCTGGTGGCTCTCAAGGAGAAAATGGGTGACCACCTGCCCTGAAGACTACCTGACCACAGACTTGGTGGAGACATGGCTCAGAACATGAAAACAGAAACATGGAAGTTCTTCGAAGTTCAAGCTAGATCAAGTATGAGATGCATGAGCTGCTTAGGCAGATGGAAATCAGAAGAAATCTCTCACCCCTTGCTGACCTTAGTGAACCTCAGCTACTGGAAGAAATCTCAAGTATCCAGGGTTTACGAAGAACAGTATTGAAAGTTGATGAAAGGGGACTGAGGCAGTGGCAGGAATCTGTCAGAAATTACTGCTTATTCCATGCCTCTGTATCAAAGTGGACCAGGCCATTCTATTGATCTATGAAAGAACCTCTGGAATGCTCTGTTCTGGCAGGGTGGTAATCCGACTCTCCTATAATTCTCAGGAAACACACACAGGAAACATGCATAAGCACTTCGTGCTGTAGTAGATGCTGAATCTGAGGTATCAAACACACACAGGATACAGCAATGGATGGCAGGGAGAGTGTCTTTGTTCTTAACTAGTTAGGGTGTCTCAATAAAATACAGTAGTCCCCACTTATCTGAGGGGATACATTCAAAGACCCCCAGCAGATGCTGAAACGGTGGACAGTGCTGAACCTTATATATTCTTCTACACATACACTATGATAAGTTAATTATAAATTAGGCACAGTAAGAGATTAACAATAACAACATTAAGTAAATGAGTTACTTGAACGCAAGCACTGCAATACCATAACAGTCAGTCAACTGATTATAGAGAAGGCTACTAAGTGACTCATGGCGAGGAGCATAGACAGTGTGGAGACATTGGCAAGGGGAGAATTCACTCCTGGGTGGACAGAGCAGGACGATGCAAGATTCCATCCACTACTCAGAATGGCATGCTGCTTAAGACTTTAGATTGTTATTCTGGAATTTCATTAAATGTTTGACCATGGTGACCATGGTAACTGAGACTGCAGAAAGCAAAACATGGATAAGGGAGGACTACTACAAAAAGCATTAAATTGATACATATTAAAAA

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FIGURE 292

MKVVPSSL SVLLAQVWLVPGLAPSPQS PETPAPQNQTSRVVQAPREEEDEQEASEEKAGE
EEKAWLMA SRQQLAKETSNFGFSLRKISMRHDGNMVFSPFGMSLAMTGLMLGATGPTETQI
KRGLHLQALKPTKPGLLPSLFKGLRETL SRNLELGLSQGSFAFIHKDFDVKETFFNLSKRYF
DTECVPMNFRNASQAKRLMNHYINKETRGKIPKLFDEINPETKLILVDYILFKGKWLTPFDP
VFTEVDTFHLDKYKTIKVPMMYGAGKFASTFDKNFRCHVLKL PYQGNATMLVVLMEKMGDHL
ALEDYLTTDLVETWLRNMKTRNMEVFFPKFKLDQKYEMHELLRQMGIRRI FSPFADL SELSA
TGRNLQVS RVLRRTVIEVDERGTEAVAGILSEITAYSMPPVIKVDRPFHFMIYEETSGMLLF
LGRVVNPTLL

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FIGURE 293

CTGGGATCAGCCACTGCAGCTCCCTGAGCACTCTACAGAGACGCGGACCCAGACATGAG
GAGGCTCCTCCTGGTCACCAGCCTGGTGGTTGTGCTGCTGTGGGAGGCAGGTGCAGTCCCAG
CACCCAAGGTCCCTATCAAGATGCAAGTCAAACACTGCCCTCAGAGCAGGACCCAGAGAAG
GCCTGGGGCGCCCGTGTGGTGGAGCCTCCGGAGAAGGACGACCAGCTGGTGGTGTGTTCCC
TGTCCAGAACGCGAAACTCTTGACCACCGAGGAGAACGCCACGAGGTCAAGGCAGGGCCCCA
TCCTCCAGGCACCAAGGCCTGGATGGAGACCGAGGACACCCCTGGCCGTGTCCTGAGTCCC
GAGCCGACCATGACAGCCTGTACCACCCCTCCGCTGAGGAGGACCAGGGCGAGGAGAGGCC
CCGGTTGTGGGTGATGCCAATCACCAGGTGCTCCTGGACCGGAGGAAGACCAAGACCACA
TCTACCACCCCCAGTAGGGCTCCAGGGCCATCACTGCCCCCTGTCCCAAGGCCAGG
CTGTTGGACTGGACCCCTCCCTACCCCTGCCAGCTAGACAAATAACCCAGCAGGAAA
AAAAAAAAAAAAAAA

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FIGURE 294

MRRLLLVTSLVVVLLWEAGAVPAPKVPIKMQVKHWPSEQDPEKAWGARVVEPPEKDDQLVVL
FPVQKPKLLTTEEKPRGQGRGPILPGTKAWMETEDTLGRVLSPEPDHDSLYHPPPEEQGEE
RPRLWVMPNHQVLLGPEEQDHIIYHPQ

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FIGURE 295

AGAAAGCTGCACTCTGTTGAGCTCCAGGGCGCAGTGGAGGGAGGTGAAGGAGCTCTTG
TACCCAAGGAAAGTGCAGCTGAGACTCAGACAAGATTACAATGAACCAACTCAGCTTCCTGC
TGTTCATAGCGACCACCAGAGGATGGAGTACAGATGAGGCTAATACTTACTTCAAGGAA
TGGACCTGTTCTCGTCTCCATCTCTGCCAGAAGCTGCAAGGAAATCAAAGACGAATGTCC
TAGTGCATTTGATGGCCTGTATTTCTCCGCACTGAGAATGGTGTATCTACCAGACCTTCT
GTGACATGACCTCTGGGGTGGCGCTGGACCCCTGGTGGCCAGCGTGATGAGAATGACATG
CGTGGGAAGTGCACGGTGGCGATCGCTGGTCCAGTCAGCAGGGCAGCAAAGCAGACTACCC
AGAGGGGACGGCAACTGGCCAACTAACACACCTTGGATCTGCAGAGGCGGCCACGAGCG
ATGACTACAAGAACCCCTGGCTACTACGACATCCAGGCCAAGGACCTGGCATCTGGCACGTG
CCCAATAAGTCCCCATGCAGCACTGGAGAACAGCTCCCTGCTGAGGTACCGCACGGACAC
TGGCTCCTCCAGACACTGGACATAATCTGTTGGCATCTACCAGAAATATCCAGTGAAT
ATGGAGAAGGAAAGTGTGGACTGACAACGGCCGGTACCCCTGTGGTCTATGATTTGGC
GACGCCAGAAAACAGCATCTTATTACTCACCTATGCCAGGGAAATTCACTGCGGATT
TGTTCAAGGGTATTAATAACGAGAGAGCAGCCAACGCCCTGTGTGCTGGAATGAGGG
TCACCGGATGTAACACTGAGCATCACTGCATTGGTGGAGGAGGATACTTCCAGAGGCCAGT
CCCCAGCAGTGTGGAGATTTCTGGTTTGATTGGAGTGGATATGGAACTCATGTTGGTTA
CAGCAGCAGCCGTGAGATAACTGAGGCAGCTGTGCTTCTATTCTATCGTTGAGAGTTTG
GGAGGGAACCCAGACCTCTCCTCCACCAGAGATCCCAAGGATGGAGAACAAACTTACCC
GTAGCTAGAATGTTAATGGCAGAAGAGAAAACAATAATCATATTGACTCAAGAAAAAA

FIGURE 296

MNQLSFLLFLIATTRGWSTDEANTYFKEWTCSSSPSLPRSCKEIKDECPSAFDGLYFLRTEN
GVIYQTFCDMTSGGGWTLVASVHENDMRGKCTVGDRWSSQQGSKADYPEGDGNWANYNTFG
SAEAATSDDYKNPGYYDIQAKDLGIWHVPNKSPMQHWRNSSLRYRTDTGFLQTLGHNLFGI
YQKYPVKYGEKGKCWTDNGPVI PVVYDFGDAQKTASYSPYGQREFTAGFVQFRVFNNERAAN
ALCAGMRVTGCNTEHHCIGGGGYFPEASPQQCGDFSGFDWSGYGTHVGYSSREITEAAVLLFYR

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FIGURE 297

GC GG AG CC GG CG CC GG CT GC GC AG AGG AG CC G CT CG CC G CC AC C T CG G CT GGG AG CC
CAC GAGG CT GCG CAT CCT GCC CT CGG AACA ATG GG ACT CGG CG CG GAG GT GCT TGG GCG
CG CT GCT CCT GGG GAC GCT G CAG GT GCT AG CG CT GCT GGG GCG CCC AT GAA AG CG CAG CC
AT GG CGG CAT CT GCAA AC AT AGAG AATT CT GGG CT TCC AC ACA ACT CC AGT GCT AACT CAAC
AGAG ACT CT CCA AC AT GT GC CT TG ACC AT ACA AT GAA ACT TCC AAC AGT ACT GT GAA AC
CAC CA ACT TC AG TT GC CT CAG ACT CC CAG TA AT ACA AC CGG T ACC ACC AT GAA AC CT AC AG CG
GC AT CT A AT ACA AC AC ACC AGG GAT GGT CT CA AC AA AT AT GACT T CT ACC AC CT AA AG TC
TA ACC CAA AC AC AGT GTT CAG AG C AT CT GCT GCT T CAT CAG TA AC AA AT CAC A AC A ACT AT GCA T
TCT GA AG CAA AGA AAG GAT CAA A ATT GATA CT GGG AGC TT GT GGT ATT GT ATT A AC
GCT GGG AG TTT AT CT ATT CTT AC ATT GG AT GCA AA AT GT ATT ACT CA AGA AG AGG CATT C
GGT AT CGA ACC AT AG AT GA AC AT GAT GGC AT CATT AA GGA AT CC AT GG ACC A AGG AT GGA
AT AC AG ATT GAT GCT GC C CT AT CA AT TA ATT TGG TT ATT A AT AG TT AAA AC A AT ATT CT
CT TTT GAA A AT AGT AT AA AC AGG CC AT GCA T AT GAT A AG AC AA AC AGT C CT AT CTT TTT TGG CT
AAG ATT CTT CA AGG TA AC AAG GGT TGG GTT TGA A AT AA AC AT CT GG AT CTT AT AG ACC GT
TC AT ACA AT GG TTT AG CA AG TT C AT AG TA AG AC AA AC AGT C CT AT CTT TTT TGG CT
GGG GT GGG GGC AT TGG T CAC AT AT GAC CAG TA AT TGA A AG AC GT C AT C ACT GAA AG AC AG AA
TGCC AT CT GGG C AT ACA AT AAG A AG TTT GTC AC AG C ACT CAGG AT TT GGG T AT CTT TGT
AG CT CAC AT AA AG A ACT TC AGT GCT T T CAG AG C GT GG AT AT AT CTT A AT T A CT A AT GCC AC A
CAG A A AT T A CA AT CAA ACT AG AT CT GA AG C AT A ATT TA AG A A A AC AT CA AC AT TTT TG
TG CTT AA ACT GT AG T AG T TGG T CT AG A A AC A A A ACT C C

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FIGURE 298

MGLGARGAWAALLLGTLQVLALLGAAHESAAMAASANIENSGLPHNSSANSTETLQHVPSDH
TNETSNSTVKPPTSVASDSSNTTVTTMKPTAASNTTPGMVSTNMTSTTLKSTPKTTSVSQN
TSQISTSTMTVTHNSSVTSAASSVTITTTMHSEAKGSKFDTGSFVGGIVLTLGVLSILYIG
CKMYYSSRRGIRYRTIDEHDAII

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FIGURE 299

CAGCCGGGTCCCAAGCCTGTGCCTGAGCCTGAGCCTGAGCCTGAGCCCAGCCGGAGCCGG
TCGCGGGGCTCCGGCTGTGGACCGCTGGCCCCAGCGATGGCGACCCGTGGGAGGC
CTTCTCGGCTGGCTCCTGCTAGCCTGTCGTGCCTGGCGCTTCCGTGCTGCTGGC
GCAGCTGTCAGACGCCAAGAATTGAGGATGTCAGATGTAATGTATCTGCCCTCCCT
ATAAAGAAAATTCTGGCATATTATAAAAGAACATATCTCAGAAAGATTGTGATTGCCTT
CATGTTGTGGAGCCCAGCCTGTGCAGGGCTGATGAGAACATACTGTCTACGCTGTGA
ATGCAAATATGAAGAAAGAACAGCTCTGTCACAATCAAGGTTACCAATTATAATTATCTCCA
TTTGCCCTACTCTGTACATGGTATATCTTACTCTGGTGGAGCCACTGAAAGAGG
CGCCTTTGGACATGCACAGTTGATAAGAGTGTGATGATATTGGGATCACCAGCCTT
TGCAAATGCACACGATGTGCTAGCCGCTCCGCAGTCGAGCCAACGTGCTGAACAAGGTAG
AAATATGCACAGCAGCGCTGGAAGCTCAAGTCCAAGAGCAGCGAAAGTCTGTCTTGACCGG
CATGTTGTCTCAGCTATTGGAAATTGAATTCAAGGTGACTAGAAAGAAACAGGCAGACAA
CTGGAAAGAACTGACTGGGTTTGCTGGTTCATTTAACCTTGTGATTTCACCAACT
GTTGCTGGAAGATTCAAAACTGGAAGCAAAACTTGCTGATTTTTCTGTTAACGTA
ATAATAGAGACATTTAAAAGCACACAGCTCAAAGTCAGCCAATAAGTCTTCTATTTG
TGACTTTACTAATAAAATCTGCCTGTAAATTATCTTGAAGTCCTTACCTGGAACA
AGCACTCTTTTACCATAGTTAACCTGACTTTCAAGATAATTTCAGGGTTTG
TTGTTGTTGTTTTGTTGTTGGAGAGGGAGGGATGCCGGAAAGTGGTT
AACAACTTTTCAAGTCACTTACTAAACAAACTTTGTAAATAGACCTTACCTTCTATTT
TCGAGTTCACTTATTTGCAGTGTAGCCAGCCTCATCAAAGAGCTGACTTACTCATTG
ACTTTGCACTGACTGTATTATCTGGTATCTGCTGTCGTGACTTCATGGTAAACGGGAT
CTAAAATGCCTGGTGGCTTCAAAAAAGCAGATTTCATGTACTGTGATGTCTGATG
CAATGCATCCTAGAACAAACTGCCATTGCTAGTTACTCTAAAGACTAAACATAAGTCTG
GTGTGTGGTCTTACTCATCTTAGTACCTTAAGGACAAATCCTAAGGACTTGGACACT
TGCAATAAGAAATTTATTTAAACCCAAGCCTCCCTGGATTGATAATATACACATTG
TCAGCATTCCGGTCGTGGTGGAGAGGGCAGCTGTTGAGCTCCAATATGTGAGCTTGA
AGGGCTGGGTTGTGGTGCCTTCTGAAAGGTCTAACCATATTGGATAACTGGCTTTT
TCTTCCTATGTCCTTTGGAATGTAACAATAAAATAATTGGAAACATCAA

*309/310***FIGURE 300**

MATLWGGLRLGSLLSCLALSVLLAQLSDAAKNFEDVRCKCICPPYKENSGHIYNKNIS
QKDCCDCLHVVEPMPVRGPDVAYCLRCECKYEERSSVTIKVTIIYLSILGLLLLYMVYLTL
VEPILKRRLFGHAQLIQSDDDIGDHQPFANAHVLARSRSRANVLNKVEYAQQRWKLQVQEQR
RKSVFDRHVVLS

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FIGURE 301

GCACCTGCGACCACCGTGAGCAGTCATGGCGTACTCCACAGTGCAGAGAGTCGCTCTGGCTT
CTGGGCTTGTCTGGCTCTGTCGCTGCTGCCAAGGCCTCCTGTCCCGCGGGAAAGCGG
CAGGAGCCGCCGCGACACCTGAAGGAAAATTGGGCCGATTCCACCTATGATGCATCATCA
CCAGGCACCCTCAGATGCCAGACTCCTGGGGCTCGTTCCAGAGGTCTCACCTGCCGAGG
CATTGCAAAGGCCAAGGATCAGGTGGAGGTGCTGGAGGAGGTAGTGAAGAGGTCTG
ATGGGGCAGATTATTCCAATCTACGGTTTGGGATTTTTATATATACTGTACATTCTATT
TAAGGTAAGTAGAACATCCTAATCATATTACATCATGAAAATCTAATATGGCGATAAAAAA
TCATTGTCTACATTAAAATTCTTATAGTCATAAAATTATTCAAATCCATCATCTTTA
AATCCTGCCTCCTCTCATGAGGTACTTAGGATGCCATTATTCAGTTCACATAAGAATG
TTTACTCAATGTTAAGTGTGCCCCAAAATTCAACAACAAAGGCAGAACTAGGACTT
GAACATGGATCTTTGGTTCTTAATCCAGTGAGTGATACAATTCAATGCACTCCCCGTCCA

FIGURE 302

MAYSTVQRVALASGLVLALSLLLPKAFLSRGKRQEPPPTPEGKLGRFPPMMHHQAPSDGQT
PGARFQRSHLAEAFAKAKGSGGAGGGSGRGLMGQIIPIYGFGIFLYILYILFKVSRIILI
ILHQ

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FIGURE 303

CGGCTCGAGTGCAGCTGTGGGAGATTCAGTGCATTGCCTCCCTGGGTGCTCTCATCTT
GGATTGAAAGTTGAGAGCAGCATGTTTGCCC ACTGAAACTCATCCTGCTGCCAGTGTAC
TGGATTATTCCCTGGGCCTGAATGACTTGAATGTTCCCCGCTGAGCTAACAGTCATGTG
GGT GATT CAGCTCTGATGGATGTGTTCCAGAGCACAGAACAAATGTATATTCAAGAT
AGACTGGACTCTGT CACCAGGAGAGCACGCCAAGGACGAATATGTGCTATACTATTACTCCA
ATCTCAGTGTGCCTATTGGCGCTCCAGAACCGCGTACACTTGATGGGGACATCTTATGC
AATGATGGCTCTCCTGCTCCAAGATGTGCAAGAGGCTGACCAGGAACCTATATCTGTGA
AATCCGCCTCAAAGGGAGAGCCAGGTGTTCAAGAAGGCGGTGGTACTGCATGTGCTTCCAG
AGGAGCCAAAGAGCTCATGGTCATGTGGTGGATTGATT CAGATGGATGTGTTCCAG
AGCACAGAAGT GAAACACGTGACCAAGGTAGAATGGATATTCAGGACGGCGCAAAGGA
GGAGATTG TATT CGTTACTACCACAAACTCAGGATGTCTGGAGTACTCCCAGAGCTGGG
GCCACTTCCAGAATCGTGTGAACCTGGTGGGGACATTTCCGCAATGACGGTCCATCATG
CTTCAAGGAGTGAGGGAGTCAGATGGAGGAAACTACACCTGCAGTATCCACCTAGGAAACCT
GGT GTTCAAGAAAACCATTGTGCTGCATGT CAGCCCGAAGAGCCTCGAACACTGGTACCC
CGGCAGCCCTGAGGCCTCTGGTCTGGTGGTAATCAGTGGT GATCATTGTGGAAATTGTC
TGTGCCACAATCCTGCTGCTCCCTGTTCTGATATTGATCGTAAGAAGACCTGTGGAAATAA
GAGTT CAGTGAATTCTACAGTCTGGTGAAGAACACGAAGAAGACTAATCCAGAGATAAAAG
AAAAACCTGCCATT TGAAAGATGTGAAGGGAGAACACATTACTCCCCAATAATTGTA
CGGGAGGTGATCGAGGAAGAACCAAGTAAAAATCAGAGGCCACCTACATGACCATGCA
CCCAGTTGGCCTCTCTGAGGT CAGATCGGAACAACTCACTGAAAAAAAGTCAGGTGGGG
GAATGCCAAAACACAGCAAGCCTTTGAGAAGAATGGAGAGTCCCTCATCTCAGCAGCGG
TGGAGACTCTCCCTGTGTGTCCTGGCCACTCTACAGT GATT CAGACTCCCCTC
CCAGCTGTCCCTGTCTCATTGTTGGTCAATAACACTGAAGAGTGGAGAATTGGAGCCTGG
CAGAGAGACTGGACAGCTGGAGGAACAGGCCTGCTGAGGGAGGGAGCATGGACTTGGC
CTCTGGAGTGGGACACTGCCCTGGAACCCAGGCTGAGCTGAGTGGCCTCAAACCCCCGTT
GGATCAGACCCCTCCTGTGGCAGGGTTCTAGTGGATGAGTTACTGGGAAGAATCAGAGATA
AAAACCAACCCAAATCAA

FIGURE 304

MFCPLKLILLPVLLDYSLGLNDLNVSPPPELTVHVGDSALMGCVFQSTEDKCIFKIDWTLSPG
EHAKDEYVLYYSNLSVPIGRFQNRVHLMGDILCNDGSLLLQDVQEADQGTYICEIRLKGES
QVFKKAVVLHVLPEEPKELMVHGGLIQMGCVFQSTEVKHVTKVEWIFSGRRAKEEIVFRYY
HKLRMSVEYSQSWGHFQNRVNLVGDIFRNDGSIMLQGVRESDGNNYTCSIHLGNLVFKKTIV
LHVSPPEPRTLVTPAALRPLVLGGNQLVIIVGIVCATILLPVLLIIVKKTCGNKSSVNSTV
LVKNTKKTNPETKEKPCHFERCEGEKHIYSPIIVREVIEEEPSEKSEATYMTMHPVWPSLR
SDRNNNSLEKKSGGMPKTQQAF

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FIGURE 305

CTATGAAGAAGCTTCCTGGAAAACAATAAGCAAAGGAAACAAATGTGTCCCATCTCACATG
GTTCTACCCTACTAAAGACAGGAAGATCATAAACTGACAGATACTGAAATTGTAAGAGTTGG
AAACTACATTTGCAAAGTCATTGAACCTCTGAGCTCAGTTGCAGTACTCGGGAAGCCATGCA
GGATGAAGATGGATACATCACCTTAAATATTAAAACCTGGAAACCAGCTCTCGTCTCCGTTG
GCCCTGCATCCTCCTGGTGGCGTGTGATGGCTTGATTCTGCTGATCCTGTGCGTGGGG
ATGGTTGTCGGCTGGTGGCTCTGGGATTGGTCTGTGATGCAGCGCAATTACCTACAAGA
TGAGAATGAAAATCGCACAGGAACCTGCAACAATTAGCAAAGCGTTCTGTCAATATGTGG
TAAAACAATCAGAACTAAAGGGCACTTCAAAGGTATAATGCAGCCCCGTGACACAAAC
TGGAGATATTATGGAGATAGCTGCTATGGTTCTCAGGCACAACCTAACATGGGAAGAGAG
TAAGCAGTACTGCACTGACATGAATGCTACTCTCCTGAAGATTGACAACCGGAACATTGTGG
AGTACATCAAAGCCAGGACTCATTAAATTGTTGGTCGGATTATCTGCCAGAAGTCGAAT
GAGGTCTGGAAGTGGAGGGATGGCTCGGTTATCTCAGAAAATATGTTGAGTTTGGAAAGA
TGGAAAAGGAAATATGAATTGCTTATTTCTATAATGGGAAATGCACCCCTACCTTCTGTG
AGAACAAACATTATTAATGTGTGAGAGGAAGGCTGGCATGACCAAGGTGGACCAACTACCT
TAATGCAAAGAGGTGGACAGGATAACACAGATAAGGGCTTATTGTACAATAAAAGATATGT
ATGAATGCATCAGTAGCTGAAAAAAAAAAAAA

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FIGURE 306

MQDEDGYITLNKTRKPALSVGPASSSWRVMALILLILCVGMVGLVALGIWSVMQRNYL
QDENENRTGTLQQLAKRFCQYVVKQSELKGTFKGHKCSPCDTNWRYYGDSCYGF
FRHNLTWE
ESKQYCTDMNATLLKIDNRNIVEYIKARTHЛИRWVGLSRQKSNEVWK
WEDGSVISENMF
EDGKGNNMCAYFHNGKMHPTFCENKHЫLMCERKAGMTKVDQLP

(30) 60/088,742	10 Jun/juin 1998 (10.06.1998)	US	(30) 60/090,254	22 Jun/juin 1998 (22.06.1998)	US	(30) 60/091,478	2 Jul/juill 1998 (02.07.1998)	US
(30) 60/088,810	10 Jun/juin 1998 (10.06.1998)	US	(30) 60/090,355	23 Jun/juin 1998 (23.06.1998)	US	(30) 60/091,626	2 Jul/juill 1998 (02.07.1998)	US
(30) 60/088,811	10 Jun/juin 1998 (10.06.1998)	US	(30) 60/090,349	23 Jun/juin 1998 (23.06.1998)	US	(30) 60/091,628	2 Jul/juill 1998 (02.07.1998)	US
(30) 60/088,824	10 Jun/juin 1998 (10.06.1998)	US	(30) 60/090,429	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/091,633	2 Jul/juill 1998 (02.07.1998)	US
(30) 60/088,825	10 Jun/juin 1998 (10.06.1998)	US	(30) 60/090,431	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/091,646	2 Jul/juill 1998 (02.07.1998)	US
(30) 60/088,826	10 Jun/juin 1998 (10.06.1998)	US	(30) 60/090,435	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/091,673	2 Jul/juill 1998 (02.07.1998)	US
(30) 60/088,858	11 Jun/juin 1998 (11.06.1998)	US	(30) 60/090,444	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/091,978	7 Jul/juill 1998 (07.07.1998)	US
(30) 60/088,861	11 Jun/juin 1998 (11.06.1998)	US	(30) 60/090,445	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/091,982	7 Jul/juill 1998 (07.07.1998)	US
(30) 60/088,863	11 Jun/juin 1998 (11.06.1998)	US	(30) 60/090,461	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/092,182	9 Jul/juill 1998 (09.07.1998)	US
(30) 60/088,876	11 Jun/juin 1998 (11.06.1998)	US	(30) 60/090,472	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/092,472	10 Jul/juill 1998 (10.07.1998)	US
(30) 60/089,090	12 Jun/juin 1998 (12.06.1998)	US	(30) 60/090,535	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/093,339	20 Jul/juill 1998 (20.07.1998)	US
(30) 60/089,105	12 Jun/juin 1998 (12.06.1998)	US	(30) 60/090,538	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/094,651	30 Jul/juill 1998 (30.07.1998)	US
(30) 60/089,440	16 Jun/juin 1998 (16.06.1998)	US	(30) 60/090,540	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/095,282	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,512	16 Jun/juin 1998 (16.06.1998)	US	(30) 60/090,557	24 Jun/juin 1998 (24.06.1998)	US	(30) 60/095,285	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,514	16 Jun/juin 1998 (16.06.1998)	US	(30) 60/090,676	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,301	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,532	17 Jun/juin 1998 (17.06.1998)	US	(30) 60/090,678	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,302	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,538	17 Jun/juin 1998 (17.06.1998)	US	(30) 60/090,688	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,318	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,598	17 Jun/juin 1998 (17.06.1998)	US	(30) 60/090,690	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,321	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,599	17 Jun/juin 1998 (17.06.1998)	US	(30) 60/090,691	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,325	4 Aug/août 1998 (04.08.1998)	US
(30) 60/089,600	17 Jun/juin 1998 (17.06.1998)	US	(30) 60/090,694	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,916	10 Aug/août 1998 (10.08.1998)	US
(30) 60/089,653	17 Jun/juin 1998 (17.06.1998)	US	(30) 60/090,695	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/095,929	10 Aug/août 1998 (10.08.1998)	US
(30) 60/089,801	18 Jun/juin 1998 (18.06.1998)	US	(30) 60/090,696	25 Jun/juin 1998 (25.06.1998)	US	(30) 60/096,143	11 Aug/août 1998 (11.08.1998)	US
(30) 60/089,907	18 Jun/juin 1998 (18.06.1998)	US	(30) 60/090,862	26 Jun/juin 1998 (26.06.1998)	US	(30) 60/096,146	11 Aug/août 1998 (11.08.1998)	US
(30) 60/089,908	18 Jun/juin 1998 (18.06.1998)	US	(30) 60/090,863	26 Jun/juin 1998 (26.06.1998)	US	(30) 60/096,329	12 Aug/août 1998 (12.08.1998)	US
(30) 60/089,947	19 Jun/juin 1998 (19.06.1998)	US	(30) 60/091,358	1 Jul/juill 1998 (01.07.1998)	US	(30) 60/096,757	17 Aug/août 1998 (17.08.1998)	US
(30) 60/089,948	19 Jun/juin 1998 (19.06.1998)	US	(30) 60/091,360	1 Jul/juill 1998 (01.07.1998)	US	(30) 60/096,766	17 Aug/août 1998 (17.08.1998)	US
(30) 60/089,952	19 Jun/juin 1998 (19.06.1998)	US	(30) 60/091,544	1 Jul/juill 1998 (01.07.1998)	US	(30) 60/096,768	17 Aug/août 1998 (17.08.1998)	US
(30) 60/090,246	22 Jun/juin 1998 (22.06.1998)	US	(30) 60/091,486	2 Jul/juill 1998 (02.07.1998)	US	(30) 60/096,773	17 Aug/août 1998 (17.08.1998)	US
(30) 60/090,252	22 Jun/juin 1998 (22.06.1998)	US	(30) 60/091,519	2 Jul/juill 1998 (02.07.1998)	US	(30) 60/096,791	17 Aug/août 1998 (17.08.1998)	US

(30) 60/096,867	17 Aug/août 1998	US (17.08.1998)
(30) 60/096,891	17 Aug/août 1998	US (17.08.1998)
(30) 60/096,894	17 Aug/août 1998	US (17.08.1998)
(30) 60/096,895	17 Aug/août 1998	US (17.08.1998)
(30) 60/096,897	17 Aug/août 1998	US (17.08.1998)
(30) 60/096,949	18 Aug/août 1998	US (18.08.1998)
(30) 60/096,950	18 Aug/août 1998	US (18.08.1998)
(30) 60/096,959	18 Aug/août 1998	US (18.08.1998)
(30) 60/096,960	18 Aug/août 1998	US (18.08.1998)
(30) 60/097,022	18 Aug/août 1998	US (18.08.1998)
(30) 60/097,141	19 Aug/août 1998	US (19.08.1998)
(30) 60/097,218	20 Aug/août 1998	US (20.08.1998)
(30) 60/097,661	24 Aug/août 1998	US (24.08.1998)
(30) 60/097,951	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,952	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,954	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,955	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,971	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,974	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,978	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,979	26 Aug/août 1998	US (26.08.1998)
(30) 60/097,986	26 Aug/août 1998	US (26.08.1998)
(30) 60/098,014	26 Aug/août 1998	US (26.08.1998)
(30) 60/098,525	31 Aug/août 1998	US (31.08.1998)
(30) 60/100,634	16 Sep/sept 1998	US (16.09.1998)
(30) 60/115,565	12 Jan/jan 1999	US (12.01.1999)